THE RELATIONSHIP OF
PERSONAL COHERENCE AND INTERPERSONAL ATTACHMENT
WITH PSYCHOLOGICAL WELL-BEING

By

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Extensive research as documented that attachment style is strongly
related to various indicators of psychological adjustment and well-being. Secure
attachment is positively correlated to adjustment and each of the three forms of
insecure of attachment are negatively correlated to adjustment. Similarly, an
individual's sense of coherence (SOC) is strongly related to adjustment and
physical health. SOC is comprised of three subcomponents: meaningfulness,
comprehensibility, and manageability. In this study SOC was utilized to
represent constructivism, a form of psychology that focuses upon an individual's
efforts in meaning-making. This study examined the interrelationship of
attachment and SOC with respect to psychological adjustment.

A total of 142 university students filled out self-report instruments for attachment, SOC, and psychological adjustment (as measured by anxiety, depression, self-esteem, self-concept clarity, and identity integration). Exploratory analyses documented significant correlations between the three of the four attachment styles and psychological adjustment. SOC was also shown to have strong correlations with these indicators of adjustment. Statistical procedures using multivariate (MANCOVA) and univariate (ANOVA) analyses indicated that attachment became insignificant with respect to adjustment when the influence of coherence was controlled. This result implies that, within the context of secure or insecure attachment, the effects of coherence comprise a very strong and significant relationship with psychological adjustment. Further research may show that this result signifies that the usual positive relationship of attachment with adjustment is undermined when an individual's sense of coherence is diminished and, conversely, the negative relationship of insecure attachment with adjustment is enhanced when coherence is increased. This interpretation would support constructivism and may also have clinical implications in assisting individuals with interpersonal attachment difficulties.

CHAPTER ONE
INTRODUCTION

While many traditional psychological perspectives focus upon personality as primarily the product of heredity, childhood experiences, or environmental conditioning, constructivism presents an alternative perspective that focuses upon the proactive construction of meanings and coherent order from experience. A premium is placed on the active, interpretative, and "meaning-making" efforts that constitute the organization and reorganization of the personality throughout the lifespan (Rosen, 1996; Guidano, 1991, 1995). While developmental experiences may organize and constrain an individual's personality and behaviors, constructivists generally view development in relation to the construction of flexible structures rather than a fixed foundation. These structures can be transformed through ongoing reorganizations of meaning that contribute to an increasingly complex and well-integrated sense of coherence regarding one's self and world.

Whereas constructivism often focuses upon an individual's contemporary efforts in meaning-making, attachment theory, with its roots in psychoanalysis, emphasizes the lifelong effects of early childhood relationships upon adult functioning and emotional well-being. John Bowlby (1988), one of the founders

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of attachment theory, asserted that "attachment . . . is the hub around which a person's life revolves, not only when he is an infant or a toddler. . but throughout his adolescence and his years of maturity as well" (p. 442). The quality of early attachment relationships has been subsequently shown to predict important aspects of adult relationships, cognitive styles and psychological adjustment.

The purpose of this study is to assess the relationship and interaction between individuals' sense of coherence and their quality of attachment with respect to psychological adjustment. This investigation specifically seeks to determine whether an individual's sense of coherence is positively correlated with attachment and, furthermore, whether this sense of coherence mediates aspects of psychological health independent of the quality of attachment; e. g., whether weak coherence may undermine strong attachment and, conversely, strong coherence may enhance adjustment despite poor attachment. An overview of constructivism is important to provide a framework for understanding the interface among an individual's personal coherence, quality of attachment, and psychological adjustment that this project will explore.

Constructivist Framework

Constructivism emphasizes humans' active meaning-making efforts and their central role in psychological processes. While not denying reactive and passive aspects of cognition, behavior, and emotion, constructivists focus upon the proactive constructions of meaning that give sense and order to experience.

Humans are thus viewed as co-creators of their world and are often more influenced by their interpretations of events rather than the events per se.

Another basic premise of constructivist metatheory concerns self-organization, which refers to structures that guide psychological processes and give rise to a coherent sense of self (Mahoney, Miller, & Arciero, 1995). Noting that "human experience . . . presupposes a level of stability and coherence" (p. 94), Guidano (1995) concluded that "it is now increasingly apparent that the individual human knower contributes significantly to the coherence and stability that he or she experiences" (p. 94).

Constructivists acknowledge that a person's self-organization originates in early interpersonal relationships and that the attachment relationships between an infant and caregivers significantly contribute to a stable sense of self and personality organization. However, alternative organizations of self often arise with fundamental changes in personal meaning (Guidano, 1987, 1991; Mahoney, 1991). Guidano's (1987, 1991) developmental-constructivism described at length the various forms of self-organizations established in early developmental phases that can be later modified in adult meaning-making efforts. Guidano (1995) asserted that "although attachment is central to the stable . . . self, new patterns of attachment emerge throughout maturational stages during adulthood, attachments that function to confirm, support and further expand the pattern of self-coherence that has thus far been structured" (p. 99).

Recent research has turned to study the role of meaning in creating coherence and order in individuals' lives, and has demonstrated a positive relationship between coherence and psychological well-being. Debats (1998) reviewed a substantial literature relating personal meaning to physical and psychological health in diverse areas such as psychotherapy, gerontology, sociology, addictions, and medicine. For example, Antonovsky (1987) found that a sense of meaningfulness and comprehensibility was commonly present in individuals that maintained physical and psychological health despite extreme stress, such as surviving in concentration camps. He found that these survivors possessed a strong experience of coherence of themselves that often arose from this meaningfulness.

Antonovsky (1987) conceptualized this disposition as sense of coherence (SOC) which he characterized as consisting in three components: meaningfulness, which represents the belief that life struggles are challenges in which one can find meaning and to which one can commit oneself; comprehensibility, which represents the personal belief that one's external and internal environments are structured, predictable and explicable; and, manageability, which is the sense that one has or can create the resources necessary to meet life's demands. With recent research documenting positive correlations between SOC and measures of physical and emotional well-being, SOC is considered to be a global disposition that guides specific coping strategies in assisting adjustment. With its central focus upon meaning-making

along with a substantial correlation to psychological well-being, Antonovsky's scale allows empirical evaluation of coherence as conceptualized by constructivists such as Guidano (1987,1991). Sense of coherence therefore provides a measure to assess the interaction of coherence with personality organizations influenced by early attachment relationships.

Attachment Theory

Attachment theory was developed by John Bowlby and Mary Ainsworth by utilizing notions from ethology, evolution, cybernetics, developmental psychology and psychoanalysis to articulate the dynamics of human affectional bonds. This theory focuses upon the relationship between an infant and caregivers where an infant's specific attachment behaviors become organized within the first year.

An infant's attachment behaviors are quantifiable and can be distinguished by two broad categories reflecting secure and insecure attachment. In this study, I will use Bartholomew and Horowitz's (1991) attachment topology that presents a two-dimensional, four-quadrant model that specifies adult attachment styles or prototypes. The four prototypes are often described in reference to positive and negative working models, or sets of expectations and views of self and of others. Secure attachment, which involves working models with a positive view of self and of others, represents individuals that usually experience comfort with both autonomy and intimacy. Advoidant attachment applies to persons with a positive model of self and a negative,

distrustful model of others. These individuals tend to emphasize self-reliance while downplaying intimacy. In contrast, preoccupied attachment, involving negative views of self and positive views of others, pertains to persons that are often obsessed in their relationships to others while experiencing significant self-doubt. Finally, fearful attachment applies to individuals with negative working models of self and others. These persons often report social avoidance, fear of intimacy and self-doubt.

Research with attachment theory documents that the quality of the relationship between caregivers and an infant affects many aspects of child's subsequent life, such as love relationships (Shaver & Hazan, 1993), adjustment to stress (Mikulincer, 1993) and cognitive qualities such as curiosity and openmindedness (Mikulincer, 1997). Concerning psychological adjustment, the quality of attachment has been strongly correlated with a wide range of behavior such as alcohol consumption (Brennan, Shaver, & Tobey, 1991), negative affect (Simpson, 1990), and physical symptoms (Hazan & Shaver, 1990). Mikulincer and Florian (1998) state that "our basic premise is that secure attachment is an inner resource that may help a person to positively appraise stressful experiences, to constructively cope with these events, and to improve his or her well-being and adjustment. In contrast, insecure attachment . . . can be viewed as a potential risk factor, leading to poor coping and to maladjustment" (p.143).

Overview

In summarizing Guidano's (1987,1991,1995) systematic efforts to integrate attachment theory within a broader framework of developmental constructivism, Rosen (1996) remarks that his "paradigm offers the most comprehensive and systematic contemporary constructivist approach to psychopathology and psychotherapy available" (p. 12). Using Guidano's framework with its emphasis upon proactive meaning-making and the concurrent changes in self-organization, this interface among an individual's personal coherence, quality of attachment, and psychological adjustment can be addressed.

Bowlby (1973) argued that there is a "strong case for believing that an unthinking confidence in the unfailing accessibility and support of attachment figures is the bedrock on which stable and self-reliant personality is built" (p. 322). He adds that attachment possesses a dominant influence upon psychological functioning "from the cradle to the grave" (1988, p. 82). In comparison, constructivists additionally emphasize the interplay of past developmental organizations with contemporary efforts that emerge from active meaning-making. For example, Guidano (1991) views attachment as a developmental foundation upon which further self-organization and constructing coherence takes place. These personality organizations, while engendering a degree of psychological inertia, are often transformed by changes in coherence.

Guidano (1995) stated that

> a constructivist approach thus acknowledges the self-
> begetting inertia of earlier knowledge structures, but it also
> emphasizes that changes in the personal sense of self (and,
> hence, world) require an epistemic restructuring that is far
> more complex than determinist approaches have
> acknowledged. The parameters influencing that restructuring
> remain one of the most important challenges facing
> constructivist theorists, researchers, and therapists in the
> years to come (p. 99).

Accordingly, this study addresses the impact of personal coherence and meaning-making upon the "earlier knowledge structure" engendered by attachment relationships. We seek to clarify whether the quality of attachment has a significant relationship with an individual's coherence; that is, whether coherence is positively related to attachment or instead remains relatively autonomous from attachment. We also seek to assess the relative influence of coherence and attachment with respect to psychological adjustment to clarify whether the adjustment normally associated with secure attachment can be significantly perturbed by failures in coherence and, conversely, whether strong coherence can offer stability and adjustment despite the lack of secure attachment.

CHAPTER TWO
REVIEW OF THE LITERATURE

The purpose of this project is to investigate the relationships among personal coherence, attachment, and psychological adjustment. Accordingly, the purpose of this chapter is to review the relevant literatures on constructivism, coherence, and attachment theory to provide a framework for the research hypotheses. This chapter has five components: part one provides an overview of constructivism to clarify the notions of coherence and meaning-making; part two summarizes sense of coherence (SOC) as a scale to assess coherence and meaning-making; part three addresses attachment theory, its assessment, and the research relating attachment to psychological adjustment; part four reviews Guidano's developmental-constructivism to articulate the interrelationships among attachment, coherence, meaning-making, and adjustment; and part five presents the central theoretical and empirical questions of this study and the related research hypotheses.

Constructivist Basis for Coherence, Self-Organization, and Meaning-making

Constructivism offers a theoretical orientation to articulate this project's goal to assess the interrelationships among personal coherence, attachment, and psychological adjustment and well-being. In the last four decades,

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constructivist psychology has developed a view of human cognition and behavior as active, self-generating, and interpretative. While few constructivists deny the impact of events and environmental influences, the central focus is upon individuals' active interpretation of these events and experiences. Individuals create meanings about the events often with constructs and narratives. Thus, constructivists tend to avoid discussing 'real' events per se but rather focus upon how events and experiences are construed.

Within the field of psychology, otherwise diverse expressions of constructivism can be considered to have at least three common principles or tenets concerning human cognition and activity that distinguish them from other perspectives. These include a belief in (i) self-organizing development (ii) nuclear morphogenic structure, and (iii) the proactive nature of meaning-making (Mahoney, Miller, & Arciero, 1995). The first principle, self-organizing development, signifies that the individual plays an active and creative role in ordering and personalizing experience, which contributes to the development of a sense of personal coherence. Guidano (1995) stated that

> Human experience . . . presupposes a level of stability and
> coherence. Traditional views of human nature . . . presumed
> that external reality was the primary source of experiential
> stability. It is now increasingly apparent that the individual
> human knower contributes significantly to the coherence and
> stability that he or she experiences (p. 94).

Guidano remarked that this self-organizing ability gives rise to a coherent sense of self that is central in personal experience and agency. Mahoney and his colleagues (1995) stated that humans self-organize in order to "protect and perpetuate their integrity" (p. 109).

The second tenet of constructivist metatheory addresses nuclear morphogenic structures, which indicates the view that "humans are organized with a central/peripheral structure such that their central (core, nuclear) processes are (a) given special 'protection' from challenge (and hence change) and (b) that these central processes constrain the range of particulars that can emerge at a peripheral ('surface structure') level" (Mahoney, Miller, & Arciero, 1995). The term 'nuclear' indicates a core set of structures, processes or rules which are essentially abstract and guide conscious processes. These tacit ordering rules constrain a person's experience of her world and self and are considered to be difficult to access and to explicitly describe while being resistant to change. Bowlby's notion of working models, which, simply stated, represent an individual's fundamental views of oneself and of the trustworthiness of others, may exemplify nuclear structures that tacitly guide central psychological processes and are difficult to explicitly access and change.

Mahoney (1991) discussed four "core ordering processes" or "processing themes" that are fundamentally involved in every person's attempts to organize experience. He specifies these themes as "(1) valence or value [including emotion and motivation], (2) reality or meaning, (3) personal identity, and (4)

power or control" (p. 178). For example, a depressive individual's core ordering theme concerning meaning is that the future, the world and/or oneself is essentially negative. This ordering theme then engenders pessimistic expectations concerning, for example, relationships and career.

The third principle of constructivist metatheory, which is often considered as the most fundamental component of constructivism, emphasizes humans' active meaning-making abilities that imposes order and organization on experience. Rosen (1996) stated that the human "is not the passive recipient of received knowledge but must take the stance of an active agent who constructs and organizes meanings out of life's encounters" (p. 4). Guidano (1991), arguing that the fundamental defining characteristic of a person is the quest for and construction of meaning, asserted that "the most singular aspect of the human existence is its 'effort after meaning' " (p. 13). Guidano considered "meaning as the human dimension of existence" (p. 13). Meaning-making not only orients basic life activities and values but can reorganize and transform an individual's sense of self and identity. Meanings that are central to one's identity and life orientation often assume a fundamental role to the extent that these "meanings . . . become a matter of life and death urgency" (Guidano, 1991, p. 14).

The interrelationship of two fundamental tenets of constructivist metatheory--proactive, constructive knowledge processes and self-organizing development--is particularly noteworthy at this juncture (Mahoney, Miller, &

Arciero, 1995). Through language, meanings are often actively construed that assist in the emergence of the organization and the stability of experience. While coherence and stability partly arise from the meanings that individuals and groups actively construct, the converse is also true: coherent self-organization also gives birth to meanings. This organization not only abstracts structures but also facilitates personalized experience and self-reference. Guidano (1991) asserts that "this continuous search for meaning takes form in the lifespan construction and maintenance of a coherent personal meaning" (p. 14). He added that "the emergence of language and reflexive self-referring--transforming the immediacy of living into an endless circularity between experiencing and explaining--makes the construction of meaning an essential ingredient of the process of self-individuation and self-recognition" (1995, p. 13).

Constructivists hold that, through this active construction of meanings, an individual contributes significantly to the coherence and stability that he or she experiences as oneself. Active meaning-making not only organizes (and "endlessly reorganizes") and directs perception, learning and knowledge of the world, but also helps to personalize experience (Mahoney, 1991, p. 95). In short, this meaning-making confers coherence and organization upon experience while also establishing a personal identity. Accordingly, Guidano made a significant connection among coherence, meaning and personal identity: "from a self-organizing perspective, bringing worth a coherent world is the first and last condition for having a consistent self-identity, with personal meaning as

the proactive understanding that reveals a specific mode of being becoming the key notion in . . . [a constructivist] theory of personality" (p. 15). The relationship between meaning-making and a coherent sense of self and experience of the world thus becomes fundamental within a constructivist perspective. Guidano (1987) summarized these conceptual interrelationships by remarking that

> The essential feature of this [constructivist] perspective
> considers the self-organizing ability of a human knowing
> system as a basic evolutionary constraint that, through the
> maturational ascension of higher cognitive abilities,
> progressively structures a full sense of self-identity with
> inherent feelings of uniqueness and historical continuity. The
> availability of this stable and structured self-identity permits
> continuous and coherent self-perception and self-evaluation
> in the face of temporal becoming and mutable reality (p. 3).

Recent research documents a substantial association between the quality of meaning in an individual's life and psychological well-being (e.g., Debats, 1998; Klinger, 1998; Korotkov, 1998). The coherence arising from active meaning-making and self-organizing not only confers personal identity but substantially affects adaption and emotional adjustment (Guidano,1991). On the other hand, the absence of continuity and coherence of meanings and a

unified personal story often engenders emotional disturbance. Rosen (1996) summarized constructivist links among coherence, meaning, identity, adjustment and personal relationships by remarking that "coherence in an individual's identity or meaning system is important . . . to able to function well . . . [so that] pathology may be envisioned as a limitation in the individual's capacity to create meaning, with that capacity based in the ability to participate in human relationships" (p. 143).

Research in narrative constructivism exemplifies these relationships among meaning-making, self-organization, coherence, and emotional functioning. Illustrating the role that personal narratives play in the construction of a coherent sense of self, McAdams (1993) asserted that "to make meaning in life is to create dynamic narratives that render sensible and coherent the seeming chaos of human existence" (p. 166). The protean and chaotic stream of experience becomes shaped and organized partly from narrative structures that provide themes and sequential order. Narratives are a means to build representations of the past, exchange information in the present, and to anticipate the future. In describing individuals' pursuit of continuity as a "yearning for coherence" in their life and identity, Robert Neimeyer (1994) asserted that individuals seek to construct a continuity of meaning in their lived experience through personal stories (p. 231). Coherence in narratives thus represents not only the establishment of important meanings that interpret life

experiences but also signifies the presence of continuity, organization and orientation.

Psychological maladjustment is commonly reflected in the incoherence of an individual's narrative. Parry and Doan (1994) assert that

there is not much safety outside of a story; instead, there are only feelings of disconnection, lack of frame of reference, and uncertainty about where people belong and how they are to know. Without a story. . . people's lives seem to have little direction or meaning (p. 45).

For example, emotional disturbance indicated by incoherence is powerfully exemplified in the narratives of trauma survivors. Personal characterizations are often incomplete, disempowering or incoherent. One study of 77 incest survivors revealed that 80% of the group were still struggling years afterwards to find meaning or "make sense" of the trauma in the context of their life (Silver, Boon, & Stones, 1983). The brutal nature of the trauma exceeded many survivors' ability to assimilate it into a meaningful coherence with fundamental, 'core' assumptions and values. On the other hand, this study revealed that survivors that managed to assimilate the trauma and could give coherent accounts of their experiences reported better psychological adjustment.

The work of Pennebaker and his colleagues (1988) also clarified this relationship among coherence, narrative, and emotional well-being. In this study, 46 undergraduates were asked to write about either the most stressful

and traumatic life experience or about an insignificant assigned topic for four consecutive days. One experimental group wrote only about the facts without any references to feelings about the trauma (trauma-factual condition); another group wrote only about their feelings while avoiding discussing facts (trauma-emotion condition); a third group wrote about the entire experience, including facts and emotions (trauma-combination condition); and a control group wrote upon a trivial topic. The researchers found that the trauma-combination group had the lowest number of visits to the student health infirmary during the next six months. Pennebaker et al. suggest that the opportunity to create and disclose a coherent and complete narrative of a stressful experience can enhance a person's health. Pennebaker and Beall (1986) remark that "the disclosure of negative emotion and the building of a clear cognitive story are important components in healthy functioning" (p. 5). With these apparent associations among meaning-making, coherence, and emotional health, we will now summarize a measure specifically constructed to assess these relationships.

<div align="center">Sense of Coherence</div>

With Antonovsky's (1987) sense of coherence (SOC) scale, we can empirically evaluate our notion of coherence and its relationship to meaning-making, attachment, and psychological well-being. The coherence variable was informally described by Antonovsky as an individual's belief and confidence that his or her subjective and objective 'environments' are predictable and that one can most likely adapt as well as can be expected.

Antonovsky defined SOC as

> a global orientation that expresses the extent to which one
> has a pervasive, enduring though dynamic feeling of
> confidence that (1) the stimuli deriving from one's internal and
> external environments . . . are structured, predictable, and
> explicable; (2) the resources are available to one to meet the
> demands posed by these stimuli; and (3) these demands are
> challenges, worthy of investment and engagement (p. 19).

Antonovsky's research shows that SOC possesses three components,
comprehensibility, manageability, and meaningfulness, which together address a
broad range of factors that may assist in creating or maintaining personal
coherence. Korotov (1998) described the three components of SOC as
theoretically and empirically "intertwined, experiential factors that are influenced
by life experiences" (p. 55).

The comprehensibility component refers to the level to which a person
perceives stimuli as ordered, predictable and cognitively clear. In describing an
individual's development of comprehensibility, Korotkov (1998) stated that
"consistent and predictable experiences allow people to <u>anticipate</u> and
understand what specific idiosyncratic events may arise in a given situation and
how best to adapt" (added emphasis, p. 55). (As discussed below, this critical
role of anticipation parallels Kelly's (1963) Fundamental Postulate and the
central place of this activity in constructivism.) Korotkov mentioned that

managing resources and responding effectively often depends upon comprehensibility and making cognitive sense of situations and crises. If surprises occur, an individual with a strong sense of comprehensibility believes that the surprises will eventually be explicable and orderly. "Death, war, and failure can occur, but such a person can make sense of them" (Antonovsky, 1987, p. 16).

The manageability component is construed as the degree to which an individual perceives that he or she possesses the personal and interpersonal resources necessary to satisfactorily respond to demands and stressors. These resources may be in "one's control or . . . controlled by legitimate others - one's spouse, friends, colleagues, God, history, the party leader, a physician - whom one feels one can count on, whom one trusts" (Antonovsky, 1987, p. 18). When an unexpected disturbance or crisis occurs, a person with elevated manageability will not be overwhelmed and rendered a passive victim but will find some avenue of adequate solution or response.

The third component of the SOC scale is the meaningfulness factor and is considered by Antonovsky to be the most significant and influential in the interrelationships of the three components. Meaningfulness refers to the extent that an individual responds to challenging events and situations with engagement and personal investment. Korotkov (1998) asserted that meaningfulness is the emotional counterpart of comprehensibility.

Korotkov stated that

> if individuals' experiences are characterized by participatory
> decision making in which they are free to select their own
> outcomes, a strong sense of meaningfulness develops.
> However, when individuals have no say in any matter, they
> tend to see life as devoid of meaning. This is true of personal
> relationships as well as work life (p. 55).

Antonovsky (1987) argued that strong comprehensibility and manageability will be tenuous and remain in disequilibrium unless a person experiences sufficient meaningfulness. He concluded that an individual's comprehensibility and/or manageability will diminish when his or her meaningfulness is impaired. Conversely, when an individual has a strong sense of meaningfulness, then either his or her comprehensibility and/or manageability will eventually be enhanced. Antonovsky exemplified this latter case with Holocaust survivors that maintained a strong sense of coherence with their personal meaningfulness, despite the abysmal absence of making cognitive sense or having manageable resources and effective activities.

Antonovsky conceptualized SOC as a global, dispositional way of viewing and responding to the world that is relatively stable by early adulthood. However, unlike variables such as attachment that is primarily cultivated within a specific development period, SOC can be significantly strengthened or diminished with potent life experiences at any developmental phase. In addition,

while SOC exists as a part of a person's personality structure, it also occurs "in the ambience of a subculture, culture, or historical period" (1987, p. 7), pointing out the important contextual aspects of the sense of coherence notion. This contextual embeddedness of coherence parallels Guidano's (1987, 1991) depiction of coherent identity occurring with an individual's interpersonal, cultural, and developmental setting. Antonovsky (1979, 1987) explicitly addressed the influence of systemic thought upon his conceptualization of SOC upon observing that family and culture often substantially contributes to an individual's coherence.

Although SOC was not conceptualized within a constructivist framework, it can nevertheless be utilized to address key issues raised by constructivism in light of its central emphasis upon meaningfulness and comprehensibility, which together are similar to the emotional and cognitive aspects of constructivism's fundamental view of meaning-making. The conceptualization of comprehensibility, emerging from experiences of predictability and order, parallel's the Fundamental Postulate of Kelly's (1963) constructivism, which stated that "a person's processes are psychologically channelized by the ways in which he anticipates events" (p. 103).

Sense of Coherence and Psychological Well-being

Inspired by his research with concentration camp survivors, Antonovsky (1987) posed the issue, "How do people cope and survive?" (p. 3), which became a fundamental question guiding his work. Similar to Guidano's view that

connects coherence and meaning with emotional well-being, Antonovsky investigated survivors' "will to meaning" and a concomitant physical survival and emotional coping. His subsequent research provides a wide range of studies correlating physical and emotional well-being with an individual's ability to comprehend her world, generate meaning, and effectively manage, that is, a strong sense of coherence (SOC). Antonovsky's major opus, Unraveling the Mystery of Health, documents numerous narratives of survivors that illustrate the role of coherence, and specifically, the influence of personal meaning-making upon health and psychological well-being.

As a medical sociologist, Antonovsky challenged the pathogenic orientation of traditional health care with its emphasis upon pathogenesis (i.e., the study of the origins of disease). Instead, his research of physical and psychological health emphasizes salutogenesis to directly assess factors that support and even create health. Antonovsky later considered sense of coherence to be a metaconcept of salutogenesis (Korotkov, 1998).

Beginning in the 1970s, a substantial program of research has assessed diverse factors that serve as buffers, moderators or mediators for physical and psychological coping and well-being. Antonovsky (1979) proposed the notion of generalized resistance resources (GRRs), such as social support, money, health orientation, cultural stability, that can assist in providing individuals with orderly, coherent and meaningful experiences and psychological health.

Korotkov (1998) stated that

> with the pathogenic model, researchers and practitioners tend
> to concentrate on disease prevention and "magic bullet"
> solutions. . . With the salutogenic model, the concern is with
> full and active adaptation to environments that are plagued by
> stress. To adapt, people look for those inputs from the social
> (e.g., social support) and physical environments (e.g., clean
> water), as well as from their own personal reserves (e.g.,
> personal optimism). . . The inputs are . . . [the] GRRs (p. 54).

The last decade offers a growing research foundation supporting the role
of SOC in psychological well-being. For example, Flannery, Perry, Penk, and
Flannery (1994) assessed 105 adults that completed measures for coherence,
locus of control, social support, life stress, depression, and anxiety. The results
revealed that SOC accounted for as much variance as social support and locus
of control in predicting levels of depression and anxiety. In another study of 95
adults utilizing the same measures, Flannery and Flannery (1990) found that
SOC is negatively correlated with life stress and psychological distress and
appears to lessen the impact of stress. Using the broader factor of neuroticism
to measure psychological distress, Gibson and Cook (1996) used the Eysenck
Personality Inventory and the SOC measure with 94 college students. They
found that SOC and neuroticism have a strong negative correlation (*Tau* = -.46,
p<.0009, using Kendall's correlations). A stronger relation of r = -.82 (p < .001)

between coherence and neuroticism was found in a study of 103 college undergraduates that motivated this present research (Rood & Neimeyer, unpublished). Substantial relationships between SOC and depression (r = -.77, p < .001) and SOC and self-esteem (r = .74, p < .001) were also found.

Coherence is considered by researchers such as Antonovsky (1987), Flannery et al. (1994), and Korotkov (1998) as an enduring and pervasive disposition that influences not only psychological functioning but physical health and recovery from illness or injury. For example, Chamberlain, Petrie and Azariah (1992) investigated 57 patients recovering from surgery by assessing levels of coherence, optimism, life satisfaction, physical health, pain, and mental health. Optimism and especially sense of coherence were the best predictors of improvement in postsurgerical recovery. In a parallel study, Petrie and Azariah (1990) found that an individual's levels of coherence were also excellent predictors for successful pain management.

While the three components of meaningfulness, manageability, and comprehensibility are empirically intertwined in that correlational analyses and factor analyses indicate a single latent construct for SOC (see Chapter Three), research suggests that each components may have different correlates for health and well-being (Korotkov, 1998). This important issue for this research helps to address the significance of meaningfulness and comprehensibility in predicting psychological well-being. Petrie and Brook (1990) found that meaningfulness was the best component to predict pain intensity and life

satisfaction. In predicting suicide, they found that for 150 hospitalized patients meaningfulness better predicted suicide ideation on admission than did comprehensibility and manageability, which were better predictors of suicide ideation six months later. They also found that all three components were significantly related to depression, hopelessness, and suicide ideation, although meaningfulness had consistently higher correlations for all variables. Accordingly, after reviewing the SOC research literatures, Korotkov (1998) questioned whether meaningfulness is the best predictor of psychological and physical health indices (as Antonovsky speculated) and concluded instead that each component has varying effects in different contexts.

With its central focus upon meaning-making along with a substantial correlation to psychological well-being, the sense of coherence scale allows an empirical evaluation of coherence as conceptualized by constructivists such as Guidano. Utilizing SOC, an assessment of the interplay of coherence and personality organizations influenced by the quality of attachment can be addressed.

<u>Overview of Attachment Theory</u>

Attachment theory is considered to be the joint work of John Bowlby and Mary Ainsworth (Ainsworth and Bowlby, 1991; Bretherton, 1995). Bowlby gave careful attention to an infant's response when separated from the primary caregiver. Using principles from perspectives such as ethology, control theory, and evolution, Bowlby inferred that the usual response to separation--anxiety,

protest, despair and detachment--arises from an innate system that elicits proximity between caregivers and infants, which in turn increases the infant's probability of survival. Bretherton (1995) stated that Bowlby "revolutionized our thinking about a child's tie to the mother and its disruption through separation, deprivation, and bereavement. Mary Ainsworth not only made it possible to test some of Bowlby's ideas empirically but also helped expand the theory itself. . ." (p. 45).

While virtually all infants seek the proximity of their caregivers, the specific expression of this behavior depends upon the interaction experiences with important caregivers. Utilizing a specific laboratory procedure called the "strange situation" test, Ainsworth, Blehar, Waters, and Wall (1978) identified three basic attachment patterns of behavior. Infants with secure attachment are overtly calmed by the mother's return in the test (after departing and leaving the infant with a stranger) and are able to resume their exploration of their environment. Secure infants use their caregivers as a secure base, or a source of safety, comfort and support to control distressing emotions. Maternal sensitivity is a consistent predictor of attachment (Ainsworth et al., 1978; Sroufe, 1985) and secure attachment arises from interactional synchrony, which is "the extent to which interaction [between mother and child] appeared to be reciprocal and mutually rewarding, so that its frequent occurrence would presumably foster development of the infant's working model of mother as available, responsive, and trustworthy" (Isabella, Belsky, & von Eye, 1989, p. 13).

Children with insecure attachment often have little confidence in their caregivers' accessiblity and willingness to offer support during distressful situations (Bowlby, 1969, 1973). Infants with <u>anxious-ambivalent attachment</u> respond with an approach-avoidance ambivalence to their mother's return and usually make conflicted and unsuccessful attempts to gain support. These infants are sometimes also called <u>resistant</u>, which reflects their ambivalence with the caregiver upon her return. On the other hand, infants with <u>avoidant attachment</u> refrain from interacting with the mother after her absence in the "strange situation." The behavior of these infants indicates uncertainty concerning their caregiver's availability to provide support so that the infants learn to cope with self-reliance and without social support. They often do not appear overtly anxious in their relative independence from caregivers.

Attachment patterns engender the child's construction of <u>working models</u>, which are sets of expectations and beliefs about oneself and about the behavior of the significant caregivers. Working models are tacit cognitive and affective schemas, or representations, of the self, of caregivers, of the self in important relationships, and of the social world in general. These models form relatively stable answers for the child concerning two central questions: (1) Is the child lovable and worthy? (2) Are other persons, especially attachment figures, caring and trustworthy? (Klohnen & John, 1998). Bowlby (1969, 1973) argued that a child will most likely develop a valued and positive model of self and caregivers if the caregivers consistently respond sensitively to the child's need for security,

comfort and exploration. On the other hand, children develop and internalize a negative view of self and/or of caregivers when the caregivers are often insensitive to the child's need for comfort or when the caregivers interfere with the children's desire for autonomous exploration.

The working models of self and of others can assume either negative or positive values. The Bartholomew (1990; Bartholomew & Horowitz, 1991) adult attachment typology, utilized in this research, distinguished positive and negative views of self and of others to form a two-dimensional space where each quadrant represents an attachment style or prototype. The quadrant representing secure individuals has working models of positive self and positive other. Individuals represented by negative self and negative other working models are denoted as fearful. The remaining two quadrants are considered to be more complex as they combine both positive and negative valences (Bartholomew & Horowitz, 1991). According to Bartholomew's theory, avoidant individuals feel self-sufficient and competent (positive self) but see others as untrustworthy and perhaps rejecting (negative other). On the other hand, preoccupied individuals highly value and desire close relationships (positive view of others) despite their insecurity and doubts concerning self-worth (negative self).

The secure, fearful, dismissing, and preoccupied attachment styles are commonly referred to as the prototypes. After evaluating prototype descriptions, a panel of experts in attachment theory derived characteristic attributes of the

four prototypes (Klohnen & John, 1998). The secure style typically includes characteristics such as dependable, confident, good-natured, and understanding while insecure, suspicious or unstable are typically uncharacteristic for these persons. Fearful prototypical characteristics include vulnerable, timid, distrusting, and pessimistic. The preoccupied prototype is often characterized by expressiveness, needing approval, and self-revealing while uncharacteristic attributes are aloofness, self-reliance, and calm. Finally, characteristics of the dismissing prototype include independent, rational, competent, and sarcastic while uncharacteristic attributes include being jealous, clingy and vulnerable.

Developed in childhood attachment relationships, these prototypical characteristics and the corresponding working models have been shown to possess a powerful influence throughout the lifespan. Bowlby asserted that the specific quality of attachment significantly affects an individual's development "from the cradle to the grave. . ." (1988, p. 82). Eagle (1995) similarly stated that "the emphasis on the determinative role of early experiences is expressed in the assumption that attachment styles established early in life are relatively stable throughout one's life" (p. 124). The persistence of internal working models, operating well into late adulthood is now considered to be responsible for the long-term effects of childhood experiences with caregivers (Bartholomew & Shaver, 1998). Recent longitudinal studies suggest that attachment is a highly stable quality (Rothbard & Shaver, 1994; Klohnen & John, 1998). For example, Levy and his colleagues (1998) discuss a recent study that followed 50

individuals for two decades and found attachment stability was 64%.
Interestingly, the stability of attachment was greater than 70% without any
disruptive major life events and less than 50% for individuals that had suffered at
least one significantly negative life event, suggesting mutibility of attachment in
the face of traumatic experience.

Attachment Theory and Adjustment

Originally directed at understanding child and adult psychopathology by
explicating early attachment relationships, attachment theory has documented
substantial correlations with psychological adjustment and mental health
(Bartholomew & Shaver, 1998). Secure attachment is now understood as an
inner resource that can assist in a positive appraisal of stressful experiences
and for concomitant constructive coping (Mikulincer & Florian, 1998). On the
other hand, Eagle (1995) remarked that ". . . insecure attachment and the
corresponding internal working models . . .render one especially susceptible to
pathology and to maladaptive patterns of behavior" (p. 126). After reviewing the
substantial literature on adjustment, Mikulincer and Florian (1998) concluded
that attachment is a central factor in determining successful adaptation to stress.
A person's quality of attachment has recently been significantly correlated with
diverse phenomena such as alcohol consumption (Brennan, Shaver, & Tobey,
1991), eating disorders (Cole-Detke & Kobak, 1996), negative affect (Simpson,
1990), and physical symptoms (Hazan & Shaver, 1990).

Bowlby (1969, 1973) proposed that attachment processes in early caretaking interactions serve as protective mechanisms for threat, loss and separation. Mikulincer and Florian (1998) remark that "the attachment system is activated when infants experience distress, and the goal of attachment responses is to maintain proximity to a nurturing adult, who is expected to help the infant to manage the distress and to promote a sense of well-being and security" (1998, p.144). Working models appear to function as inner structures that help to organize experience and become activated during distress.

In reviewing the research correlating attachment with psychological adaptation and well-being, Mikulincer and Florian (1998) concluded that secure persons have been shown to handle distress by a more complete acknowledgment of it, enacting instrumental constructive actions, and turning to others for instrumental and emotional support. In a study assessing the reactions of 140 Israeli students to the Iraqi missile attack during the Gulf War, Mikulincer, Florian and Weller (1993) measured attachment style, posttraumatic distress, ways of coping and residence area (in terms of general levels of danger). They found that secure attachment encourages a greater tolerance for stressful situations and allows access to unpleasant emotions without becoming overwhelmed. By utilizing problem-focused and support-seeking strategies, secure individuals more effectively cope with distress in contrast to the emotion-focused strategies often exhibited by dismissing and fearful individuals.

In a study of 40 female and 37 male undergraduates that completed measures of attachment, self-esteem, sociability, self-acceptance and psychological adjustment, Bartholomew and Horowitz (1991) also found that secure and dismissing individuals scored higher on self-esteem and self-acceptance, and scored lower on distress than fearful and preoccupied individuals. The preoccupied group showed the highest levels of emotional expressiveness, reliance on others, use of others as a secure base, caregiving, and self-disclosure. They also reported elevated levels of romantic involvement and lower levels concerning the balance of control in friendships. Bartholomew and Horowitz remark that the profile of the dismissing group was the opposite to the preoccupied group in nearly every respect (for example, elevated reliance on self while low emotional expressiveness, caregiving, and self-disclosure). The fearful group scored significantly lower than the secure and preoccupied groups on intimacy, level of romantic involvement, self-disclosure, reliance on others, and use of others as a secure base when upset.

Decades of research has documented a strong relationship between negative view of self and depression (for example, Beck, 1976; Beck, Rush, Shaw, & Emery, 1979) that subsequent research in attachment theory now also confirms. The preoccupied and fearful attachment styles have negative working models of self and these groups have now been shown to report higher levels of depression than secure or dismissing individuals. For example, Shaver and Clark (1994) compared unmarried, undergraduate, mildly depressed, and

nondepressed women along with a group of married women, half of whom were recovering from significant depression. Fearful avoidance was positively correlated with depression and negatively correlated with positive experiences in childhood with maternal figures in samples of college students and married women. Hierarchical regression analyses revealed that preoccupation and fearful avoidance largely accounted for the relationship between poor relationship functioning and depression, and explained more of the variance in relationship functioning than could be explained by depression.

Dozier and Tyrrell (1998) suggest that the different strategies used by dismissing and preoccupied individuals in psychological adjustment should engender different forms of symptoms. The authors reviewed research showing that preoccupied persons experience disorders where distress is directly and "internally" experienced, such as anxiety or depression (Cole-Detke & Kobak, 1996) or borderline personality disorder (Patrick, Hobson, Castle, Howard, & Maughn, 1994). On the other hand, the strategies used by dismissing individuals leads to disorders where symptoms are associated with externalized indices of distress ("experienced external to the self", p. 233) as in eating disorders (Cole-Detke & Kobak, 1996), conduct disorders and drug addiction (Rosenstein & Horowitz, 1996).

The adaptive role of secure attachment may arise from three major sources (Mikulincer & Florian, 1998). One source involves the secure individuals' cognitive appraisal of the world, which is usually optimistic and

trustful of the world. Mikulincer and Florian suggest that secure persons subsequently appraise stressful events with benign meanings which encourages constructive coping and stress management. A second source of adaptation arising from secure attachment is the individual's positive, yet balanced self-views, which allow a sense of mastery and confidence in confronting life problems. As Mikulincer and Florian remark that "the coherence of their self-structure may prevent the experience of distress every time they fail in meeting their own personal standards" (1998, p. 160), a parallel to coherence in constructivism and to Antonovsky's sense of coherence (SOC) can be seen.

A third source of adaptation and resilience for securely attached individuals is the positive attitude that secure individuals commonly display toward cognitive activity and information processing. The high tolerance for ambiguity, unpredictability and disorder manifested by secure individuals can facilitate the learning of improved skills when confronting stress and adversity. Mikulincer and Florian (1998) suggest that "the openness of secure persons to new information may be a sign of cognitive flexibility, which allows them to adjust to environmental changes and to develop more realistic coping plans" (p. 161).

In contrast to secure attachment, the insecure attachment styles involve varying maladaptive styles. For example, dismissive individuals often cope with stress by inhibiting their acknowledgement and display of distress and negative emotions. Despite their overt denial, these persons are believed to possess considerable underlying anxiety (Mikulincer & Florian, 1998). On the other

hand, persons with fearful attachment commonly attempt to adapt by withdrawal, isolation, distrust and avoidance of commitments. These behaviors often contribute to the development of a poor self-concept and self-esteem, and anxiety and dissociative disorders (Main, 1995). Finally, individuals with preoccupied attachment often attempt to adjust with a hypervigilant focus upon distress along with negative ruminations (Kobak & Sceery, 1988), affects (Mikulincer & Orbach, 1995), and memories (Shaver & Hagan, 1993).

Assessment in Attachment Theory

Attachment theory offers a substantial empirical paradigm developed largely from Ainsworth's work that utilized Bowlby's framework. Beginning in the 1980s, two distinct attachment research programs emerged from this empirical foundation, one emphasizing parenting and the other focused upon romantic relationships. Mary Main (1985) assessed parenting differences and investigated whether adult's current representations of their childhood attachment relationships ("states of mind with respect to attachment") affected their parenting activities, which in turn affected their children's attachment styles. Using the Adult Attachment Interview (AAI), the parents' descriptions of their childhood family relationships were coded and were found to be strongly correlated with their childrens' attachment classifications in independent assessments. Infants categorized as anxious commonly had caregivers who were anxiously preoccupied with relationship issues; infants classified as avoidant often had caregivers that were dismissing in their attachment

relationships; and, infants classified as <u>secure</u> had caregivers who were also <u>secure</u> (or "<u>free and autonomous</u>" in their descriptions of their early relationships). A fourth infant classification, <u>disorganized</u>, was found in subsequent research to be commonly associated with caregivers who were <u>unresolved</u> in terms of traumas and losses in their attachment background (and are associated with <u>fearful</u> adult attachment).

Comprising a distinct research focus, the work of Hazan and Shaver (1987) investigated adult romantic relationships motivated in part by Weiss's (1982) work that suggested that chronic loneliness is related to insecure attachment. Using Ainsworth's three patterns of childhood attachment (that is, secure, anxious, and avoidant), the authors constructed a basic self-report questionnaire where the subject identifies the pattern that characterizes their family of origin. This work has been the impetus for substantial research assessing connections among attachment, relationships, and variables such as partner selection, intimacy, divorce, couple violence, emotional expression, and attachment in therapeutic relationships.

Bartholomew and Shaver (1998) stated that these two research programs arose from "different disciplinary subcultures" which has engendered disparate, but not divergent, assessment emphases such that "the members of these two research subcultures tend to speak past each other" (p. 27). The parenting research program are former students of Ainsworth whose clinical and developmental psychology background influence a psychodynamic

conceptualization of their work while focusing upon clinical issues and parent-child relationships. For example, the AAI emphasizes the dynamics of internal working models that are indirectly revealed by the manner an individual describes childhood relationships. This assessment does not assume that individuals are conscious of these childhood dynamics. In contrast, the adult relationship research paradigm is used primarily by personality and social psychologists who conceptualize attachment in terms of personality traits and social interactions. This research line usually uses simple questionnaire measures with large samples of normal subject populations to study adult social relationships such as marriage and dating. In contrast to the psychodynamic research orientation, this group uses self-report measures that usually focus upon behaviors and feelings in close relationships that the individual is aware and can accurately describe.

Utilizing structural equation models with the various attachment assessment approaches, an underlying latent construct was found that Bartholomew and Shaver (1998) interpret as indicating a common factor originating in childhood. Although they concluded that the two assessment approaches are considered essentially interchangeable, the two assessment approaches differ in several important ways that led Bartholomew (1990) to construct the two-dimensional, four-quadrant model described above. She points out that both classifications systems obscure the issue that <u>two distinct forms of avoidance</u> exist, "one pattern motivated by a defensive maintenance of

self-sufficiency (labeled "dismissing") and the other motivated by a conscious

fear of anticipated rejection by others (labeled "fearful")" (Bartholomew and

Shaver, 1998, p. 27).

Although Bartholomew's model presents a quadrant to represent each

attachment prototype, the attachment types are not considered to have rigid and

discrete boundaries and are instead considered to be "fuzzy" (Griffin &

Bartholomew, 1994). Griffin and Bartholomew nevertheless asserted that the

prototypes "are not simply reducible to the two attachment dimensions" (p. 32)

and that the prototypes offer predictive power beyond using only a dimensional

approach. On the other hand, Fraley and Waller (1998) argued that "because

the attachment prototypes represent linear cominations of the two dimensions of

avoidance and anxiety, they are, ipso facto, reducible to the two attachment

dimensions" (p. 106). As this study will utilize continuous scores on all four

prototypes scales, this issue shoud not engender statistical difficulties in this

study.

Several other difficulties related to attachment styles can arise when

using inventories such as Bartholomew's measure when assessing levels of

psychological adjustment. Whereas secure individuals are generally expected

to be relatively psychologically healthy, dismissing individuals are often not

distinguishable from secure individuals with respect to reported symptoms. In

these instances it is not clear whether the dismissing individual is genuinely

symptom free or whether the failure to report symptoms is related to the general

inattention to, and dismissing of, symptoms. In addition, a preoccupied person, on the other hand, is generally comfortable in acknowledging distress and thus tend to report high levels of symptoms. Dozier and Tyrrell (1998) suggest that highly defensive character of dismissing individuals often excludes direct awareness of information concerning distress and they will subsequently report less symptoms. Secure and dismissing individuals then similarly report lower levels of symptomatology than the other attachment styles. Accordingly, recent research with college students has confirmed that preoccupied individuals report more symptoms than secure or dismissing women without significant differences in the latter two styles (Kobak & Sceery, 1988; Kemp and Neimeyer, 1999).

Given the strong documented relationship between attachment theory and psychological well-being, the Bartholomew measure provides an avenue for assessing the interrelationships among attachment, personal coherence, and psychological adjustment. With its notable reliability and construct validity (see Chapter Three), along with its capacity to adequately handle both prototypes and dimensions, we can investigate the interface of attachment and coherence. We now will review Guidano's constructivist framework that specifcally addresses this relationship among coherence, attachment, and well-being.

Guidano's Developmental-Constructivism: The Interplay of Constructivism and Attachment Theory

Guidano's work in Complexity of the self (1987) and The self in process (1991), along with his joint work with Liotti in Cognitive processes and emotional

disorders (1983), represent an attempt to integrate and utilize attachment theory within a broader constructivist framework. Rosen (1996) stated that

> Guidano's systems/process-oriented paradigm offers the most
> comprehensive and systematic contemporary constructivist
> approach to psychology available. Drawing heavily upon
> Piaget's and Bowlby's theory, he gives a view of self-
> organizing processes throughout the life-span (p. 12).

Guidano (1995) remarked that attachment theory is "a paradigm of human development that offers an inclusive and organized vision of the main factors that contribute to the structuring of self-knowledge" (1995, p. 95-6). He argued that the attachment relationships between an infant and its caregivers provide the interpersonal context from which meaning-making and self-organization become fundamental psychological processes. Accordingly, Guidano spoke of attachment as a developmental foundation that contributes to specific psychological organizations and behavior styles. These organizations then influence and constrain subsequent meaning-making activities and influence, e.g., healthy or pathological life experiences. For example, Guidano (1991) stated that obsessive-compulsive, depressive, phobic, and impulse control exemplify different pathological self-organizations and behavior patterns that can arise from problematic attachment relationships.

Guidano (1991) discussed the role that attachment plays in organizing the child's experiences and meanings. This organization arises within the

synchrony (or lack thereof) of attachment interactions and "the psychobiological attunement to caregivers [that] allows the newborn human primate to order its sensory inflow . . . " (p. 21). Furthermore, "the interdependency . . . of psychophysiological rhythms between infant and caregiver appear to be inherently co-dependent and co-existing with the child's activity in ordering self and world perception from the very beginning" (p.17). With this experience with attachment figures, the child's organization of experience occurs.

Furthermore, noting that the quality of attachment as influencing the organization of experience and concurrent emergence of personal identity, a central task undertaken by Guidano (1991) concerns "the organizational role that attachment exerts. . . in the development of the self" (p. 18) and the various organizational styles of personal identity. Stosny (1995) remarked that "infant and child research has demonstrated that attachment figures play a basic role in the development of an individual's self-organization " (p. 23). Connecting attachment to constructivist notions of organization, meaning, and identity, Stosny added that "'self-organization' refers to how the inner experience of the self forms coherent streams of meaning. In other words, self-organization makes the self" (p. 22).

Along with this organization of experience and the self, attachment processes contribute to the organization of emotional well-being. Guidano (1991) described how attachment orders experience into patterns or schemas that characterize various styles of emotional functioning. He wrote that with the

"regularities drawn from caregivers' behavior and motivations, the infant can start to connect diffuse basic feelings to perceptions, actions and memories, turning them into specific emotional schemata susceptible to subjective experience" (p. 19). The resultant emotional schemata leads to a unique sense of self, which is "quite stable, even though rudimentary" which allows "the unfolding of a new level of self-referentiality" (p. 22). Guidano asserted that these emotional bonds with significant others will serve as central constraints for the ordering of experience. Guidano and Liotti (1983) describe how attachment experiences lead to varying forms of adaptive or pathological self-organizations of identity and emotional schemata. For example, they propose that poor attachment encourages the development of various clinical syndromes, such as depression, phobia, obsessive-compulsive or behavioral disorders.

Attachment relationships thus influence and delimit the self-organization. However, the influences and constraints emerging from attachment relationships are not seen by constructivists as deterministic restrictions but rather only as *biases*. Guidano (1991) asserted that

> the human quest for meaning should therefore be regarded
> as the development of a proactive understanding <u>biased</u> by a
> set of specific intersubjective constraints (parent-child
> relationships, social bonds, group cohesiveness, etc.) which
> <u>define a range</u> of prototypical emotions. . . (added emphasis,
> p.14).

Theorists such as Guidano thus challenge the articulation of attachment as 'determining' self-constructions and instead suggest a more constraining or biasing effect of attachment upon later self-organizations and constructions. As Guidano notes, "the strong tendency to make close emotional bond with caregivers emerges as the fundamental . . . constraint that underlies any possible ordering of experience" (p.17-18).

Within Guidano's developmental framework, psychological health and pathology is guided by the organization that originally emerges from early attachment relationships. Guidano (1991) asserted that "adulthood is an open-ended process . . ." (p. 82) and pathological behavior arises from current failures to make new viable and coherent organizations. In contrast, Morris Eagle (1995), reviewing Bowlby and the object relational theories of Fairbairn, Winnicott, and Kohut, remarked that "in spite of differences among these theories, they all appear to converge on the proposition that pathology is largely the consequence of marked deficiencies in early caregiving-deficiencies. . ." (p. 126). Comparing constructivism with psychodynamics, Soldz (1996) remarked

constructivists are not likely to see the past as simply preserved in the present, as many psychoanalysts do. In the process of development, the individual's past ways of construing are applied to present experience. These ways are, however, transformed in the process. Thus, childlike symptoms in an adult cannot be understood simply as a replication of past experience. . . (p. 290).

Soldz added that the meaning of symptoms must be understood in the context of the adult's construal processes.

Construal processes and meaning-making contribute to alterations in self-organization which then are not simply a repetition of earlier structures formed within attachment relationships. Thus, coherences arising in the present from these construal processes create alternative self-organizations not synonymous with the attachment organization. While attachment contributes to the self-organizational style and the concomitant coherence, this coherence is not rigid but can fluctuate with major developmental challenges, life changes, or disruptions. Guidano (1995) remarked that "a constructivist approach thus acknowledges the self-begetting inertia of earlier knowledge structures, but it also emphasizes that changes in the personal sense of self (and, hence, world) require an epistemic restructuring that is far more complex than determinist approaches have acknowledged" (p. 99).

In observing that substantial changes in coherence occur throughout the lifespan, Guidano asserted that core aspects of the self are "continually transformed by new experiences so new levels of abstract self-referring matched by consequent new articulations in selfhood dynamics can be attained" (1991, p. 82). Rosen (1996) mentioned that "for Guidano, this transformational process [of meanings and perceptions] involves the ongoing reorganization of internal coherence, leading to the discontinuous emergence of more inclusive levels of the knowledge of self and of the world" (p. 13).

There are indications within the research on attachment that breakdowns in coherence through disruptions in major life events transforms the quality of attachment and the original organization. For example, in longitudinal studies following 50 individuals, major life changes are associated with significant changes in attachment relationships. Specifically, over a two decade period of time, the stability of attachment is roughly 70% in the absence of any life crisis but less than 50% with a history of at least one major crisis (Levy et al., 1998). Consequently, while attachment has been shown to buffer stress, its adaptive potential can be compromised when there is a breakdown in the usual self-organization and concomitant coherence, which is consistent with Guidano's perspective. Rosen (1996) stated that "a major point of emphasis in developmental constructivism is that an individual creates alternatives and more adaptive forms of meaning-making and thus meanings when that individual's self-organization is thrown into a state of disequilibrium" (p. 13-14)

Guidano thus viewed attachment as a critical foundation for the organization of perception, emotional schemata, and a coherent self-organization and personal identity. He integrated the notions of attachment, a coherent unity of self-organization and emotional well-being into a unified system and remarked that "the ability to maintain and regulate one's sense of self rests on the organizational unity which the developing emotional domain acquires from the very beginning" (p. 23). However, meaning and sense-making throughout the lifespan can alter these core structures and working models

arising within early attachment relationships. Guidano (1987,1991) asserted that the impact of coherent meaning is substantial and can either improve or undermine psychological functioning and health.

Summary and Hypotheses

Research in attachment theory has clearly established that an individual's quality of attachment has a persisting and substantial impact upon adult psychological functioning. Nevertheless, enhancements or disruptions in an individual's present level of coherence may significantly affect psychological functioning regardless of the quality of attachment. Although attachment has a potent relationship with adjustment and emotional well-being when considered independently, its relative influence in comparison to personal coherence is presently unknown.

The purpose of this study is to test the relationships among personal coherence, attachment and psychological adjustment. Consistent with the literature reviewed above, the following hypotheses will be tested utilizing multivariate analysis of covariance.

Hypothesis 1: SOC is significantly related to attachment: (i) secure attachment is positively related to SOC; (ii) fearful and preoccupied attachment is negatively related to SOC; (iii) no predictions are made in relation to the correlation between avoidant attachment and SOC.

Hypothesis 2: SOC and attachment are independently and significantly related to psychological adjustment: (i) SOC is positively related to self-esteem,

self-concept clarity, and identity integration, and is negatively related to depression and anxiety; (ii) secure attachment is positively related to self-esteem, self-concept clarity, and identity integration, and is negatively related to depression and anxiety; (iii) preoccupied and fearful attachment are negatively related to self-esteem, self-concept clarity, and identity integration, and are positively related to depression and anxiety; (iv) no predictions are given for avoidant attachment in relation to psychological adjustment.

Hypothesis 3: The influence of SOC is significantly greater than attachment on measures of psychological adjustment:

This relationship attempts to address the condition where individuals are securely attached but have diminished coherence and thus experiences psychological maladjustment. Conversely, individuals who are insecurely attached, within the context of a strong sense of coherence, nonetheless will show higher levels of psychological adjustment. These relationships would show that the usually positive association of attachment with psychological functioning would be undermined with disruptions in personal coherence. Similarly, an individual's psychological functioning could be enhanced with elevations in her sense of coherence, despite her insecure attachment. This relationship addresses the issue whether the attainment of meaning or comprehensibility, despite insecure attachment, can significantly assist adjustment. On the other hand, psychological functioning may be compromised

with difficulties in meaningfulness and comprehensibility despite the presence of secure attachment.

The purpose of this research was to investigate the relationship between an individual's quality of attachment and his or her sense of coherence. Next, attachment and coherence were each correlated with psychological adjustment as measured by self-esteem, self-concept clarity, identity integration, depression, and anxiety. Finally, the relationship between attachment and psychological adjustment was assessed after levels of coherence were statistically controlled.

<u>Participants</u>

The participants were 184 students taken from two undergraduate psychology courses. Each participant completed self-report questionnaires for measures of coherence, attachment, and various indicators of psychological adjustment.

As a prototype approach for attachment style was used in this study, the scores of forty-two participants could not be used as they had matching scores for their highest attachment style value. For example, some individuals affirmed both a preoccupied and a fearful style. After removing the participants with

these hybrid styles, there were 142 participants remaining that could be unambiguously assigned to an attachment style.

Each participant was asked to report his or her age, gender, marital status, and ethnicity. The mean age was 19.14 years (SD=1.56 years). Of the 89 females and 53 males, only 4 reported being married. The participants were mostly Caucasian (79%) along with African-American (7%), Hispanic (5%), Asian (5%), and Other (4%).

<div align="center">Procedures</div>

Students in two different psychology courses completed self-report measures assessing coherence, attachment and adjustment which took approximately 50 minutes. The experimenter obtained informed consent and the participants were offered the opportunity to learn more specifically about the study upon completion. Extra-credit was offered for optional participation.

<div align="center">Measures</div>

Coherence

Coherence was measured by using Antonovsky's (1987) sense of coherence (SOC) scale. Antonovsky defined SOC as an individual's belief and confidence that his or her subjective and objective 'environments' are predictable and adaptation to these environments is relatively successful (e.g., "How often do you have the feeling that there's little meaning in the things you do in your daily life?"; "Do you think that there will always be people whom you'll be able to count on in the future?"; "Do you have very mixed-up feelings and ideas?"), (see

Appendix A). This 29-item SOC scale factors into three subscales: comprehensibility, manageability, and meaningfulness. Each question has a 7-point response scale where only the extreme responses are given (ranging, for example, from "never happened" to "always happened" or from "full of interest" to "completely routine"). Korotkov (1998) reviews how the SOC was constructed utilizing a 'facet design' to systematically vary the content.

Five facets (i.e., modality, source, demand, time, SOC components), which were embedded within a mapping sentence, were used to construct the facet profiles or questions for each of the SOC subscales. All questions were structured such that each item shared common facet elements with other questions. This [structure] made all three components and their items theoretically and empirically inseparable and intertwined (p. 59).

Concerning internal consistency, Antonovsky reports Cronbach's alpha to range from .84 to .93. The intercorrelations between the three subcomponents (comprehensibility, manageability, and meaningfulness) and the general SOC scale are .52, .60, and .72, respectively. Korotkov (1998) reviews the psychometric research on the SOC scale.

Attachment

Quality of attachment was assessed utilizing Bartholomew and Horowitz's (1991) Relationship Questionnaire (RQ) that consists of four paragraphs describing four relationship styles (Appendix B). Each paragraph represents an

attachment prototype (secure, fearful, preoccupied, and dismissing) as each item has a 5-point response scale ranging from "not at all like me" to "very much like me." In general, the attachment statements address comfort with intimacy with self and/or with others (e.g., "It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.")

The paragraphs are not mutually exclusive as a respondent can have elevations in two or more prototypes. In this study, a prototype approach was used, which led to omission of the scores of participants that had two or more highest attachment values as they could not be categorized by a single style.

Mental models are evaluated by using responses on all four categories. Specifically, a model of self score is obtained by summing participants' scores of the two attachment patterns with positive self-models (i.e., secure and dismissing) and subtracting the scores on the two prototypes with negative self-models (i.e., preoccupied and fearful). A model of other score is similarly obtained by adding an individual's scores for positive other-models (i.e., secure and preoccupied) and then subtracting the scores from negative other-models (i.e., dismissing and fearful).

Levy, Blatt, and Shaver (1998) reviewed the psychometric properties of the RQ and conclude that it has good construct validity and test-retest reliability. They describe several studies that reveal a range of .70 to .75 test-retest reliability for periods as long as 4 years. Concerning correlations among the

four prototypes, they found: secure with fearful, r = .-22, p < .01; secure with preoccupied, r = -.14, (nonsignificant); secure with dismissing, r = -.18 (nonsignificant); fearful with preoccupied, r = .02 (nonsignificant); fearful with dismissing, r = -.17 (nonsignificant); and, preoccupied with dismissing, r = -.21 (nonsignificant). Levy and his colleagues concluded that these findings are compatible with Bartholomew's two-dimensional model by illustrating that the dimensions are independent.

Psychological Adjustment and Well-Being

The Self-Esteem Scale (SES) (Rosenberg, 1965) assesses generalized, global feelings of self-worth (e.g., "I take a positive attitude toward myself"; " "I certainly feel useless at times"), (see Appendix C). This scale is typically scored with a four response format (strongly agree, agree, disagree, strongly disagree). Blascovich and Tomaka (1988) summarized recent work on the SES where several studies demonstrate a unidimensional factor structure. Other studies, however, identify two correlated factors where the second factor reflects the negatively worded questions.

The alpha coefficient reliability is .86 and the test-retest correlation is .85 after a 2-week interval. Considerable convergent validity has been demonstrated for the SES. For example, SES scores correlated r=-.54 with depression, r=-.64 with anxiety and r=-.43 with anomie (Blascovich &Tomaka, 1988). Strong discriminant validity has also been demonstrated where no significant correlations have been shown with academic achievement, marital

status, locus of control, age, and gender. A review of the SES's psychometric properties can be found in Blascovich and Tomaka (1988).

The Self-Concept Clarity (SCC) scale is a self-report 12-item scale was developed by Campbell, Trapnell, Heine, Katz, Lavallee, and Lehman (1996) to examine the degree to which self-beliefs are clearly and positively defined, consistent and temporally stable (e.g., "In general, I have a clear sense of who I am and what I am"; "My beliefs about myself often conflict with one another"; "Sometimes I think I know other people better than I know myself."), (See Appendix D). SCC also explores an individual's decisiveness and sense of having definite goals along with perceived certainty.

Campbell et al. report the average alpha reliability coefficient as .86 and a test-retest reliability of .79 over a 5-month interval. Concerning convergent validity, the SCC Scale substantially correlates with measures of self-esteem (r = .61), suggesting that individuals with elevations in clarity often have corresponding strong self-esteem. Self-concept Clarity is also significantly correlated with Neuroticism (r = -.50). Campbell and her colleagues also found notable correlations with Conscientiousness (r= .47) and Positive Affectivity (r = .44) but insignificant associations with Openness to Experience and Intelligence.

The Costello-Comrey Depression and Anxiety Scales (CCDAS) has a 14-item depression scale and a 9-item anxiety scale. As this measure is considered to have a trait rather than state emphasis, the depression scale is considered to measure an individual's tendency to experience a depressive mood and the

anxiety scale assesses a predisposition for experiencing anxious affective states (Corcoran & Fischer, 1987), (see Appendix E). Each item (e.g., "Living is a wonderful adventure for me" and "It makes me nervous when I have to wait") is scored on a 9-point scale ranging either from "always" to "never" or from "absolutely" to absolutely not."

The CCDAS was normed with a broad range of clinical and nonclinical populations. The anxiety scale has a good split-half reliability of .70 and the depression scale has an excellent split-half reliability of .90. The concurrent validity is fair when comparing the anxiety scale to the Taylor Manifest Anxiety Scale and the depression scale to the Depression scale of the MMPI. A review of the instrument's psychometric properties can be found in Costello and Comrey (1987).

The Identity Integration scale consists of 10 items of the Multidimensional Self-Esteem Inventory (MSEI) and addresses an individual's sense of identity, well-defined long-term goals, and an inner sense of cohesion and integration of various aspects of his or her self-concept (see Appendix F). Epstein's conceptual model used in constructing the MSEI "suggests that Global Self-Esteem and Identity Integration represent the most basic levels of organization of the self" (O'Brien & Epstein, 1988, p. 15). The items (e.g., "I seldom experience much conflict between the different sides of my personality" and "I often feel that I lack direction in my life") have a five-point response scale ranging from "completely false" to "completely true."

O'Brien and Epstein (1988) reported an internal consistency of .85 and a test-retest reliability of .78 for a one-month interval. The results for convergent and discriminant validity are mixed; there is clear distinction between identity integration and variables such as extroversion, academic achievement, and body cathexis, but also notable correlations with measures of ego strength, depression, and neuroticism.

<div align="center">Predictions</div>

These measures were used to test predictions concerning the relationships among coherence, attachment, and psychological adjustment. First, it is expected that SOC will have a significant correlation with three of the four attachment styles. In particular, the secure attachment style will be positively correlated to SOC while the preoccupied and fearful attachment styles will be negatively related to SOC. No prediction is made concerning the avoidant (dismissing) attachment style in relation to SOC.

It is also expected that SOC will positive correlations with good psychological adjustment, that is, positive correlations with self-esteem, self-concept clarity, and identity integration, and negative correlations with depression and anxiety. Furthermore, secure attachment is predicted have positive correlations with good psychological adjustment, and preoccupied and fearful attachment is predicted to negative correlations with good adjustment. No prediction is made for avoidant attachment in relation to adjustment.

The next predictions involve a multivariate analysis of covariance (MANCOVA) with SOC and attachment as predictor variables in relation to a set of measures of psychological adjustment (the set comprised of self-esteem, depression and anxiety, self-concept clarity, and identity integration). Specifically, the levels of SOC is expected to qualify the effects of attachment in measures of psychological well-being. On the one hand, the positive relationship between psychological adjustment and secure attachment style is expected to decrease as levels of SOC diminish. In other words, the absence of a strong SOC is expected to qualify the relationship between secure attachment and measures of psychological adjustment. On the other hand, the negative relationship between psychological adjustment and the insecure attachment styles of preoccupied and fearful is expected to become attenuated when levels of SOC is increased. And finally, a positive relationship will emerge between avoidant (dismissing) attachment and psychological well-being as levels of SOC is increased.

CHAPTER FOUR
RESULTS

A series of analyses were conducted to set up, explore, and then assess the predictions of this study. These analyses are detailed in the following three sections: preliminary analyses, exploratory analyses, and primary analyses. Preliminary analyses were designed to test the effectiveness of the attachment designations and to evaluate the degree to which multiple dependencies have occurred among the dependent variables in this study. Exploratory analyses were designed to examine the relationship between attachment styles, sense of coherence (SOC), and the range of mental health variables. These exploratory analyses were used to inform the primary analyses, which consisted of a series of multivariate analyses (MANOVAs), and related univariate followups.

<u>Preliminary Analyses</u>

<u>Attachment Styles</u>

This project utilizied the prototype approach to attachment styles, which uses participant's scores only if they can be assigned to a single category of attachment. If a participant had two (or more) identical highest scores, then his or her data were not used in the primary analysis. In this study, there were 142 prototypical participants (i.e., "pure types") with 42 individuals being precluded

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from the primary analysis as a result of having two (or more) high scores (i.e.,
"mixed types"). The distribution of participants across attachment style and sex
appears in Table 1. Overall, there were 70 securely attached individuals, 33
avoidantly attached individuals, 23 preoccupied types, and 16 fearful types.
Consistent with previous studies in this area, a chi-square analysis confirmed
that there were not significant differences in the distribution in the distribution of
sex across attachment styles.

Table 1. Attachment Prototypes

Attach. Style	N	Males	Females	Mean (SD)
Secure	70	28	42	3.23 (.57)
Avoidant	33	12	21	3.56 (.56)
Preoccupied	23	8	15	3.38 (.50)
Fearful	16	5	11	3.52 (.59)

        To assess the effectiveness of the assignments of individuals into the
prototypes, a series of ANOVAs was conducted for the attachment styles. When
completing the Relationship Questionaire, each participant rated him or herself
on each of the four attachment descriptions using a 4-point rating scale. Four
one-way within subjects ANOVAs were conducted along these attachment
ratings in order to confirm the effectiveness of the assignment of individuals to
groups and to determine the robustness of this manipulation. All ANOVAs were
significant; securely attached individuals rated themselves as significantly more

secure (M=3.23; SD=.57) than avoidant (M=.69; SD=.73), preoccupied (M=1.16; SD=.96), or fearful attachment (M=1.11; SD=.81). Likewise, avoidantly attached participants reported higher levels of avoidant attachment (M=3.56; SD=.56) than secure (M=1.42; SD=.79), preoccupied (M=1.41; SD=1.10), or fearful attachment (M=1.55; SD=1.09). Preoccupied individuals also reported higher levels of preoccupied attachment (M=3.38; SD=.50) than secure (M=1.94; SD=.57), avoidant (M=1.19; SD=.91), or fearful attachment (M=1.38; SD=.72). Finally, fearfully attached individuals reported higher levels of fearful attachment than secure (M=1.74; SD=.86), avoidant (M=1.83; SD=.96), or preoccupied attachment (M=1.04; SD=.93). These results validate the attachment assignments.

<u>Dependent Variables</u>

Additional preliminary analyses were performed to clarify the multiple dependencies among the dependent variables. As shown in Table 2, the intercorrelations are all significant within p<.01. Except for the anxiety variable, all (absolute) values for the correlations were greater than r = .45 . This confirms expectations regarding the correlations among these variables, demonstrating significant intercorrelations among the multiple measures of psychological adjustment.

Table 2. Correlations among the Dependent Variables

D.V.s	SCC	Esteem	Integration	Depression
SCC	1.0			
Esteem	.56**	1.0		
Integration	.65**	.46**	1.0	
Depression	-.57**	-.61**	-.54**	1.0
Anxiety	-.39**	-.33**	-.25**	.32**

N=184 p^{**} <.01.

Exploratory Analyses

In order to examine the relationship between attachment style, sense of coherence, and measures of psychological adjustment, a series of Pearson Product Moment correlations was performed. These analyses involved the intercorrelations among scores on attachment, the correlations between coherence and attachment, and the correlations between the independent variables and the dependent variables. All participants, including "mixed types" of attachment style, were utilized in these exploratory analyses (N=184).

The cross-correlations of the attachment styles of this study (see Table 3) were generally consistent with prior research. The avoidant scores in this study had a pronounced negative correlation with secure attachment score whereas they were moderately and positively related to fearful attachment.

Table 3.   Attachment Style Correlations

	Secure	Avoidant	Preoccupied
Avoidant	-.53**	1.0	
Preoccupied	-.02	.07	1.0
Fearful	-.19*	.23**	-.11

N=184   p*<05.   p**<.01.

Attachment and Psychological Adjustment

In order to explore the relationship between between attachment and

psychological adjustment, a series of Pearson product moment correlations was

computed (see Table 4). As expected, secure attachment had significant

positive correlations with self-concept clarity, self-esteem, and identity

integration, and was negatively related to anxiety and depression. In contrast,

scores for both avoidant and preoccupied attachment documented significant

Table 4.   Attachment styles vs. psychological adjustment

Pearson Correlate	SCC	ESTEEM	IDENTITY	ANXIETY	DEPRES
SECURE	.21**	.36*	.22**	-.17*	-.22**
AVOIDNT	-.33**	-.19*	-.27**	.33**	.29**
PREOCC	-.28**	-.28**	-.16*	.19*	.22**
FEARFUL	-.05	.07	-.02	-.04	.01

N=184   p*<.05.   p** <.01.

negative correlations with self-concept clarity, self-esteem, and identity integration, and significant positive relationships with anxiety and depression. The scores for fearful attachment did not have significant correlations with the adjustment variables.

Sense of Coherence and Psychological Adjustment

Predictions concerning the relationship between SOC and psychological adjustment were supported as the correlations among coherence and the various indicators of adjustment were in general moderate to strong. As expected, SOC had positive correlations with self-concept clarity (r=.71), self-esteem (r=.59), and identity integration (r=.62), and negative correlations with depression (r=-.74) and anxiety (r=-.43), all values at a significance of $p<.01$. The expected positive relationships of SOC with well-being were upheld in this study.

Sense of Coherence and Attachment Styles

Supporting the initial prediction, sense of coherence (SOC) had a significant positive correlation of r = .37 (p<.01) with secure attachment. Although no prediction was made concerning the relationship between SOC and avoidant attachment, a significant and moderately negative correlation was shown (r =-.52, p<.01). The significant negative correlation between SOC and preoccupied attachment (r =-36, p<.01) also confirmed predictions. Fearful attachment had no significant correlation with SOC.

Primary Analyses

The primary analyses were used to test the central predictions of the study. Given the multiple dependencies among the dependent variables, a MANOVA was first conducted for attachment using the dependent variables of self-esteem, self-concept clarity, identity integration, depression, and anxiety. Attachment was defined here by the four groups of "pure types" based on the prototype selection described above. The scores of the "mixed types" participants were not utilized in this component of the research. MANOVAs are particularly robust for not violating the presupposition of normality when significant results are obtained. A series of univariate ANOVAs were conducted to followup on this result. An alpha level of significance of .05 was used for the MANCOVA analysis and was adjusted by the Bonferoni correction formula for the series of ANOVAs.

In the first component of the primary analyses, a MANOVA documented that attachment was significant with the Wilks' lambda F-value (1,121) = 2.40, with p<.01. The set of dependent variables were all significant with attachment as the only predictor in the model for p<.01, except for anxiety which had p<.015.

A series of univariate ANOVAs were performed as follow-up to determine significant effects for each of the dependent measures. All dependent variables indicated significant results with p<.05 (as adjusted by the Bonferoni correction). For self-concept clarity (SCC), F(4,121)=10.48 with p<.05. Concerning post hoc

analyses, multiple comparisons of the attachment styles (using Tukey HSD) revealed significant comparisons on this variable for secure and avoidant, secure and preoccupied, avoidant and fearful, and, preoccupied and fearful (for mean differences significant at a $p<.05$ level). For self-esteem, $F(4,121)=4.07$ with $p<.05$. Multiple comparisons of the attachment styles revealed significant comparisons of secure and avoidant, and avoidant and fearful. For identity integration, $F(4,121)=4.99$ with $p<.05$. Multiple comparisons of the attachment styles revealed significant comparisons of secure and avoidant. For anxiety, $F(4,121)=3.62$ with $p<.05$. Multiple comparisons of the attachment styles revealed significant comparisons for secure and avoidant, and avoidant and fearful. Finally, for the depression variable, $F(3,121)=5.08$ with $p<.05$. Multiple comparisons of the attachment styles revealed significant comparisons only for secure and avoidant groups.

The next component of the primary analyis utlizied a MANCOVA with Sense of Coherence (SOC) as the covariate in the model with the four prototype attachment styles. The MANCOVA assessed the relative influence of the attachment styles and SOC in relationship to the set of dependent variables. SOC dominated the model with a Wilks' Lambda of $F(2, 141) = 61.48$ ($p<.001$). Attachment became insignificant with a Wilk's Lambda of $F(2, 141) =.701$.

The series of univariate ANOVAs were again performed as follow-up to reveal significant effects on each of the dependent variables using $p<.05$ after adjusting for the Bonferoni correction. SOC again documented powerfully

significant results with F values all greater than 58.00 with p<.05 except for anxiety with $F(1,121)=16.85$ (p<.05). With SOC in the model, the ANOVAs assessing attachment now documented nonsignificance for each dependent variable.

In summary, attachment confirmed expectations of positive relationships with with well-being as measured by SCC, self-esteem, identity integration, anxiety, and depression. Nevertheless, when controlling for the effects of SOC, its relationship to psychological adjustment and well-being became nonsignificant. On the other hand, SOC indicated a powerful relationship with the dependent variables as a combined set and as individual variables.

CHAPTER 5
DISCUSSION

This chapter will first discuss the relative support for the study's hypotheses and then will consider various interpretations of the primary results. Limitations of the study will then be discussed along with considerations for future research. Overall, the results of this investigation indicated a moderately positive relationship between secure attachment and various indicators of psychological adjustment. In contrast, two of the three forms of insecure attachment had negative relationships with adjustment. Sense of coherence (SOC) had moderate to strong positive correlations with adjustment as well as significant correlations with three of the attachment styles. To assess the primary hypothesis, a MANCOVA then documented the insignificance of attachment with respect to adjustment when controlling for the effects of SOC, suggesting the possible centrality of coherence to interpersonal attachment and psychological adjustment.

Initial Hypotheses

The exploratory analyses assessed the first two hypotheses of the study. The first hypothesis concerned the basic correlations between SOC and the various attachment styles. The second hypothesis addressed the independent relationships of SOC and attachment with psychological adjustment.

<u>SOC and Attachment Styles</u>

The first hypothesis had three subcomponents addressing the relationship of SOC to secure attachment, then preoccupied and fearful insecure attachment, and finally to avoidant attachment. SOC was hypothesized to be positively related to secure attachment, negatively related to preoccupied and fearful attachment, and no prediction was made concerning avoidant attachment.

SOC had significant positive correlations with secure attachment and negative correlations with the avoidant and preoccupied insecure attachment styles. The positive relationship of SOC with secure attachment ($r=.37$, $p<.01$) was expected in light of previous research showing (independent) positive correlations for SOC and secure attachment with various indicators of psychological health. Securely attached individuals tend to find that their life is very meaningful, understandable, interesting, and having goals and a sense of capability in relation to managing the demands of life.

This positive relationship between SOC and secure attachment is expected from the theoretical framework of this work along with various empirical studies. For example, Guidano's conceptual work (1987, 1991, 1995) advocates an integral relationship between the formation of an individual's personal coherence arising with his or her early positive attachment relationships. He proposed that important interrelationships exist among a person's quality of attachment, the capacity to produce substantive meaning, and the quality of coherence and organization of personality.

No predictions were made concerning the relationship of the avoidant style with SOC as it was unclear whether the self-reliant nature of these individuals would engender sufficient personal coherence. Nevertheless, this group had the most pronounced correlation with SOC (r=-.52, p<.01) of all of the attachment styles, indicating that avoidant persons usually have a poor sense of coherence. Avoidant individuals thus tend to 'negatively' endorse items that describe their life as very meaningful, having fascinating experiences, and having the resources to manage the challenges of life. This result relating poor coherence with avoidant attachment style again is consistent with Guidano's work. He proposed that insecure attachment typically involves a "constraint" in the personal experience of harmony and congruity (1995, p. 18).

The negative expectations concerning SOC and preoccupied and fearful attachment was only partially supported; the fearful group did not have any significant relationship to SOC in this study, perhaps reflecting the low number of participants in the study of this group. Preoccupied attachment, however, was shown to have the expected negative relationship with coherence (r=-.36, p<.01). Guidano's (1987, 1991) framework again presents a cogent view concerning the apparent lack of coherence of preoccupied attached individuals as their overfocus upon others reveals their underdeveloped sense of self.

Sense of Coherence (SOC) and Adjustment

The first part of the study's second hypothesis was supported as Pearson product correlations indicated that SOC had significant relationships with

measures of psychological adjustment. SOC had notably elevated values on every dependent measure (i.e., self-concept clarity (SCC), self-esteem, identity integration, anxiety, and depression) . These results supported expectations that personal coherence would predict levels of adjustment and emotional well-being. High levels of coherence indicate reduced 'negative' symptoms such as sadness, disappointment, fear, nervousness, and over-sensitivity (for depression, $r=-.74$ and for anxiety, $r=-43$, $p<.01$). In addition, individuals with higher levels of meaningfulness, manageability, and/or comprehensibility had strong self-esteem ($r=.59$, $p<.01$) and self-concept clarity ($r=.71$, $p<.01$). They commonly endorsed items expressing satisfaction with oneself, and had a clear and relatively stable sense of self-knowledge without distressing conflict. Individuals with substantial SOC often negatively endorsed items such as "When I think about the kind of person I have been in the past, I am not sure what I was really like" and "Even if I wanted to, I don't think I would tell someone what I'm really like."

While no known previous research had been published concerning the relationship between SOC and identity integration, the positive expectations concerning this relationship was confirmed ($r=.62$, $p<.01$). Individuals with a heightened coherence often endorsed items such as "I feel very certain about what I want out of life," and "I often feel torn in different directions and unable to decide which way to go" (reversed scored). With these substantial correlations with psychological adjustment, this investigation appears consistent with

contemporary research on SOC (Petrie & Brook, 1990; Gibson & Cook, 1996)
that documents a powerful relationship with emotional adjustment.

On a theoretical level, these substantial positive relationships among
coherence and indicators of emotional well-being support various constructivist
accounts linking successful meaning-making, coherence, and psychological
adjustment. For example, in attempt to integrate coherence, meaning, identity,
adjustment, and personal relationships, Rosen (1996) remarked that "coherence
in an individual's identity or meaning system is important . . . to be able to
function well . . . [so that] pathology may be envisioned as a limitation in the
individual's capacity to create meaning, with that capacity based in the ability to
participate in human relationships" (p. 143). Consequently, the constructivist
framework is consistent with the results of this research documenting positive
correlations among strong SOC and positive identity integration, self-esteem,
and self-concept clarity, along with diminished anxiety and depression.

Attachment Styles and Psychological Adjustment

The latter part of the second hypothesis was also mostly supported by
indicating significant positive relationships between secure attachment and
adjustment, and negative relationships between the preoccupied attachment and
adjustment. Although no prediction was made concerning avoidant attachment
and adjustment, this style in fact had the largest negative correlations with
psychological well-being. The fearful attachment group once again had no
significant correlations with adjustment.

In addition to these individual attachment styles and the corresponding relationships to psychological adjustment (discussed below), the MANOVA performed in the primary analyses indicated the significance of attachment to psychological adjustment. The series of univariate ANOVAs revealed that attachment was significant on all five dependent measures. Attachment then confirmed expectations that it was significantly related to psychological adjustment.

Secure Attachment and Adjustment

As predicted, secure attachment had significant correlations with psychological adjustment, which is consistent with the general research in attachment theory (Bartholomew & Horowitz's (1991) research on self-esteem; Shaver & Clark's (1994) work on depression; Mikulincer & Florian's (1998) research on distress and anxiety). Individuals with secure attachment had negative correlations with anxiety ($r=-.17$, $p<.01$) and depression ($r=-.22$, $p<.01$). Securely attached individuals had a positive correlation with self-esteem ($r=.36$, $p<.01$) and thus reported that they feel that they are persons of worth, are relatively competent, do not feel that they are failures, and take a positive attitude toward oneself. Securely attached individuals also had positive correlations with identity integration ($r=.22$, $p<.01$), which meant they in general were more likely to report that they seldom feel conflicted in terms of the different sides of their personality and are comfortable with themselves. Confirming expectations of a positive correlation with self-concept clarity ($r=.21$, $p<.01$),

securely attached individuals had less ambiguity about themselves and their lives than did insecurely attached persons. Consequently, secure attachment upheld moderate and positive correlations with the indicators of psychological adjustment used in this study.

Avoidant Attachment and Adjustment

No predictions were made concerning the avoidant attachment style because this group has occasionally not reported difficulties with psychological distress consistent with other insecure attachment styles (Bartholomew, 1990; Fraley & Waller, 1998; Kemp, & Neimeyer, 1999). This inconsistency in reporting symptoms raised concerns that these individuals do not readily acknowledge negative symptoms and are defensive. Despite these concerns, this group not only reported significant levels of psychological distress, the correlations with adjustment had the largest negative correlations of all of the insecure styles. In short, avoidantly attached persons acknowledged pronounced difficulties with their sense of well-being. They reported negative levels of self-esteem ($r=-.19$, $p<.05$), self-concept clarity ($r=-.33$, $p<.01$), and identity integration ($r=-.27$, $p<.01$) along with elevated levels of anxiety ($r=.33$, $p<.01$) and depression ($r=.29$, $p<.01$). Avoidantly attached persons often endorsed items indicating that they felt like a failure, felt misunderstood by others, were conflicted about themselves and their future, and experienced significant worry and sadness.

Preoccupied Attachment and Adjustment

The results confirmed that preoccupied individuals report an impaired sense of well-being and adjustment. In this study, this group indicated difficulties with self-esteem ($r=-.28$, $p<.01$), self-concept clarity ($r=-.28$, $p<.01$), and identity integration ($r=-.16$, $p<.05$). Consistent with the findings in attachment research (Kemp & Neimeyer, 1999), preoccupied individuals struggle with emotional distress and have significant levels of anxiety ($r=.19$, $p<.05$) and depression ($r=.22$, $p<.01$). These findings suggest that their overemphasis upon the acceptance by others contribute to problems such as identity disturbances, affective instability, and conflicted interpersonal relationships. These symptoms, when chronic and present in pronounced levels, are common for personality disorders such as borderline and histrionic types (Millon & Davis, 1997).

Fearful Attachment and Adjustment

This group comprises the only component of the research that had insignificant results concerning psychological adjustment. Ten percent of subjects are prototypically fearful in attachment research (Bartholomew & Shaver, 1998) and this project similarly had 12%. It is unclear why the fearful attachment style failed to show significant relationships with measures of psychological adjustment.

Discussion and Interpretation of Primary Results

A MANCOVA was performed in order to test the third hypothesis concerning the relationship of attachment and coherence to measures of

adjustment and well-being. Prior to this computation, a MANOVA confirmed expectations adjustment was significant in regards to psychological adjustment, independent of considerations of coherence. A follow-up series of ANOVAs revealed that attachment was significantly related to each dependent measure of adjustment. However, after controlling for the effects of coherence in a MANCOVA, attachment became insignificant to psychological adjustment. This result supported the third and central hypothesis. Moreover, coherence was shown to have a substantial and dominating effect in the MANCOVA in contrast to attachment.

The meaning of this effect is difficult to determine precisely because clear causal inferences cannot be drawn. In attempt to clarify the complex relationship between attachment and coherence, numerous issues and implications will now be addressed. Several of the conceptual issues will first be broached, interspersed with various empirical findings from this study that may provide some clarification of the results. At this juncture, it appears that the only unequivocal statement of the primary results is that interpersonal attachment offers no significant contribution to (certain indicators of) psychological adjustment after the effects of Sense of Coherence are controlled. Other stronger interpretations, such as secure individuals may become more psychologically maladjusted when coherence is compromised, cannot yet be definitively made.

In addition to the need to address potential methodological biases or difficulties (discussed below), several conceptual issues also appear to be important. For example, one central issue involves whether the construct of attachment has any relevance after coherence is removed. It is conceivable that many constructs would become negligible upon the removal of an individual's sense of coherence (in relationship to a variety of dependent variables, including indicators of psychological adjustment). However, the low-to-moderate shared variances between attachment styles and coherence imply that these constructs are sufficiently distinct and that the insignficance of attachment after accounting for coherence is not directly expected. It then appears that a trivial interpretation of the results, namely, attachment <u>necessarily</u> becomes insignificant after controlling coherence, is not warranted.

Four possible relationships between attachment and coherence will now be briefly considered that may assist in the interpretation of the results. One possibility is that coherence accounts for or causes attachment so that the coherence of an individual's personality makes attachment possible. In this view, coherence establishes a foundation that makes attachment possible whereas the lack of adequate coherence would impede the formation of interpersonal attachment. Although not directly addressing attachment, Korotkov (1998) appears to hold this view that positive changes in SOC often provide the basis for subsequent changes in intimacy. Another possibility is the inverse relationship: the quality of early attachment accounts for or causes the

formation of an individual's coherence. In this case, secure attachment provides the foundation for an individual's coherence. Bowlby (1988) appears to support this view for children as well as adults.

A third possibility concerning the interrelationship of attachment and coherence is that both constructs are accounted for and/or caused by a third underlying variable. For example, this third variable may be a construct (for example, 'self-organization') that accounts for an individual's quality of attachment relationships along with his or her capacities for meaning-making, comprehensibility and/or manageability. Finally, a fourth possibility about the relationship of attachment and coherence is that they are dialectically interrelated: attachment may contribute to the formation of coherence but further changes in coherence can lead to changes in the attachment style. Guidano (1987, 1991, 1995) argues that attachment forms the coherence of an individual's personality while further developments of coherence through meaning-making can substantially contribute to subsequent changes in attachment. He proposed that attachment establishes a foundation for personal coherence and self-organizations, and that this coherence in turn influences an individual's attachment relationships and style. Antonovsky (1987), the originator of the SOC construct, also appears to support this dialectical view.

Although this study is correlational and cannot determine a specific or causal relationship between attachment and coherence, several empirical studies may assist in clarifying the four possible relationships. Several studies

in attachment theory research will first be discussed, followed by a discussion of results from this study.

While defending research that links attachment style to subsequent personality organization, Levy and his colleagues (1998) also offer evidence that changes in personal coherence after disruptions in major life events often transform an individual's quality of attachment. In longitudinal studies following 50 individuals, major life changes and crises were associated with subsequent significant changes in the quality of attachment style. It was found that, over two decades, the stability of attachment was roughly 70% in the absence of any life crisis, but less than 50% with a history of at least one major crisis (Levy et al., 1998). Consequently, it appears that the adaptive potential of attachment can be impeded after there is a notable crisis and subsequent change in an individual's usual capacity for manageability and coherence. In short, interruptions in coherence may compromise attachment despite the fact that attachment appears to originally contribute to coherence and personality organization.

Another longitudinal study (Fraley & Waller, 1998) documents that the quality of adult attachment improves (i.e., becomes secure) for many adults after there is a development of stability and order in their life. Although there was not a direct discussion of coherence in this study, it is likely that these adults would have increased levels of SOC in terms of improved manageability, meaningfulness, and/or comprehensibility. Consequently, it appears that studies

within attachment research do not support the view of a simple, 'unidirectional' relationship between attachment and coherence (i.e., that attachment accounts for coherence or that coherence accounts for attachment). These studies seem to support the view of a dialectical relationship between interpersonal attachment and personal coherence. Whether a third underlying construct can better account for this relationship cannot yet be determined.

In light of the complex relationship between attachment and coherence, it remains difficult to evaluate whether one of the practical goals of the study can be unequivocally answered, namely, whether the adjustment and well-being of securely attached individuals is undermined by losses in coherence and, conversely, the poor adjustment of insecurely attached individuals can be enhanced by increases in coherence (by increases in manageability, meaning-making, and/or comprehensibility). This issue has clinical and practical significance by attempting to specify aspects of personal enhancement (such as meaning-making) that may assist interpersonal attachment. Without further clarification of the relationship between coherence and attachment, it appears that we cannot yet definitively claim that, for example, insecure attachment is enhanced or overcome by improvements in personal coherence. Factorial or longitudinal studies that document changes in adjustment along with corresponding changes in coherence, regardless of attachment style, may provide more substantial clarity concerning this clinical goal of the study.

Limits of the Study

Despite the generally significant nature of the study's findings, a number of limitations qualify the interpretability of its results. These limitations include issues of external validity, socially desirability, common method concerns, and the correlational nature of the study.

Although the findings were robust in documenting the dominance of coherence over attachment styles, the extent that the results can be generalized to populations other than university students remains unclear. The composition of this sample was limited to fairly high-functioning individuals with relatively high levels of intellectual development and access to resources and support. On the one hand, as the attachment paradigm has been shown to apply to a wide range of populations (Bartholomew & Shaver, 1998), it seems likely that the results of this study could be generalizable to other normal populations including a wide diversity of age, gender, culture, and socioeconomic status. On the other hand, this result documenting attachment's relative insignificant relationship to adjustment when coherence is controlled may not apply to various 'nonnormal' populations, such as individuals with impaired intellectual development or with various conditions such as schizophrenia or autism. The validity of these results thus remain restricted until broader populations are assessed.

Another limitation concerns the exclusive use of self-report measures and concomitant problems such as social desirability. Whereas many individuals may present themselves in a positive light and "fake good," the anonymous

structure of the self-report can help to alleviate this problem. Nevertheless, difficulties in assessing complex variables such as attachment must be taken into account where, as addressed throughout this work, researchers in attachment theory have found that the avoidant attachment style may be highly defensive and underreport their negative symptoms (Bartholomew, 1990). Whereas this group acknowledged negative symptoms, and in fact had the most negative relationship to coherence and psychological well-being, the inclusion of some validity measures (such as a social desirability scale or observer or partner ratings) may account for variance arising from self-report measures.

Another issue that may have limited the validity of the results concerns the instruments that were selected and their use of language. It is possible that the insignificant relationship of attachment to adjustment when accounting for coherence may have emerged from the wording of the measures. For example, the descriptions of the attachment styles (see Appendix B) may have appeared similar to various items of the SOC measure (see Appendix A). Accordingly, the relationships documented between attachment and coherence would then be an artifact of similar language or common method. Although item analysis may help to clarify this issue, it does not appear likely that there is in fact a significant confound of items upon review of the study's results. For example, the correlations and subsequent shared variances between SOC and the attachment styles are small to moderate; this fact appears to indicate that the items are sufficiently independent and allow for varying correlations between SOC and

attachment. Consequently, it appears unlikely that the primary findings of the study are simply the result of the particular common language used in the questionaire's items.

Another limitation of this study concerns the complex relationship between coherence and attachment. Given the correlational nature of this project, the causal relationship between these variables remains unknown and indeterminant. Accordingly, the results showing the relative insignificance of attachment to adjustment after controlling the role of coherence can raise questions, as mentioned above, as to the underlying relationship between coherence and attachment. These issues and conjectures remain qualified by the specific and limited focus of the project. Further research using longitudinal methods with attachment and SOC may clarify their interaction. Ideally, research directed at uncovering causal relationships would show that changes in SOC influence an individual's quality of attachment. Or, conversely, they might show that transformations in interpersonal attachments directly contribute to changes in SOC. In either event, longitudial or (quasi) experimental manipulations would help to determine the relationship between these variables.

Conclusion

This investigation supported and extended previous research in interpersonal attachment and Sense of Coherence. Consistent with expectations, attachment styles were strongly related to psychological adjustment and emotional well-being. However, the effects of attachment were

qualified substantially by accounting for levels of coherence. This result raises various conceptual and empirical issues that appear to indicate a complex relationship between attachment and coherence. Nevertheless, a number of limitations associated with this study qualify the interpretability of this finding. These issues and limitations suggest caution regarding interpreting the study's primary results, such as suggesting that an individual's secure attachment can be undermined by lowered levels of coherence. Although this interpretation is consistent with the results of this study, further longitudinal and experimental research needs to further clarify the relationship and the interaction of attachment and SOC.

APPENDIX A
SENSE OF COHERENCE

Sample items:

1. When you talk to people, do you have the feeling that they don't understand you?

1	2	3	4	5	6	7
Never have that feeling			Occasionally have that feeling			Always have that feeling

2. In the past, when you had to do something which depends upon cooperation with others, did you have the feeling that it surely wouldn't get done?

1	2	3	4	5	6	7
surely would not get done						surely would get done

3. Think of the people with whom you come into daily contact, aside from the ones to whom you feel closest. How well do you know most of them?

1	2	3	4	5	6	7
you feel that they're strangers						you know them very well

4. Do you have the feeling that you don't really care about what goes on around you?

1	2	3	4	5	6	7
very seldom or never						very often

5. Life is :

1	2	3	4	5	6	7
full of interest						completely routine

6. Until now your life has had:

1	2	3	4	5	6	7
no clear goals or purpose						very clear goals and purpose

RELATIONSHIP QUESTIONNAIRE

Please read the following four paragraphs. Then indicate, by marking one of the numbers from 0 to 4 on your answer sheet, how accurately each description reflects how you are in relationships.

1. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Not at all   Very much
like me   0_____1_____2_____3_____4   like me

2. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Not at all   Very much
like me   0_____1_____2_____3_____4   like me

3. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Not at all   Very much
like me   0_____1_____2_____3_____4   like me

4. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Not at all   Very much
like me   0_____1_____2_____3_____4   like me

APPENDIX C
SELF-ESTEEM SCALE

1	2	3	4
strongly disagree	disagree	agree	strongly agree

1. I feel that I am a person of worth, at least on an equal basis with others.

2. I feel that I have a number of good qualities.

3. All in all, I am inclined to feel that I am a failure.

4. I am able to do things as well as most other people.

5. I feel I do not have much to be proud of.

6. I take a positive attitude toward myself.

7. On the whole, I am satisfied with myself.

8. I wish I could have more respect for myself.

9. I certainly feel useless at times.

10. At times I think I am no good at all.

SELF-CONCEPT CLARITY

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

1. My beliefs about myself often conflict with one another.

2. On one day I might have one opinion of myself and on another day I might have a   different opinion.

3. I spend a lot of time wondering about what kind of person that I appear to be.

4. Sometimes I feel that I am not really the person that I appear to be.

5. When I think about the kind of person I have been in the past, I am not sure what I was really like.

6. I seldom experience conflict between the different aspects of my personality.

7. Sometimes I think I know other people better than I know myself.

8. My beliefs about myself seem to change very frequently.

9. If I were asked to describe my personality, my description might end up being different from one day to another day.

10. Even if I wanted to, I don't think I would tell someone what I'm really like.

11. In general, I have a clear sense of who I am and what I am.

12. It is often hard for me to make up my mind about things because I don't really know what I want.

COSTELLO-COMREY DEPRESSION AND ANXIETY SCALES

Sample items:

(Depression scale)
1. I feel that life is worthwhile.

					Probably	Definitely	Very definitely	Absolutely
	Very							
Absolutely	definitely	Definitely	Probably	Possibly	not	not	not	not
9	8	7	6	5	4	3	2	1

4. I feel that there is more disappointment in life than satisfaction.

					Probably	Definitely	Very definitely	Absolutely
	Very							
Absolutely	definitely	Definitely	Probably	Possibly	not	not	not	not
9	8	7	6	5	4	3	2	1

(Anxiety scale)
6. I am a tense "high-strung" person.

					Probably	Definitely	Very definitely	Absolutely
	Very							
Absolutely	definitely	Definitely	Probably	Possibly	not	not	not	not
9	8	7	6	5	4	3	2	1

7. I am more sensitive than most other people.

					Probably	Definitely	Very definitely	Absolutely
	Very							
Absolutely	definitely	Definitely	Probably	Possibly	not	not	not	not
9	8	7	6	5	4	3	2	1

APPENDIX F
IDENTITY INTEGRATION

1	2	3	4	5
Completely false	Mainly false	Partly true and partly false	Mainly true	Completely true

1. It is often hard for me to make up my mind about things because I don't really know what I want.

2. I don't have much of an idea about what my life will be like in 5 years.

3. I seldom experience much conflict between the different sides of my personality.

4. I often feel that I lack direction in my life - i.e., that I have no long-range goals or plans.

5. Once I have considered an important decision thoroughly, I have little difficulty making a final direction.

6. Sometimes it's hard for me to believe that the different aspects of my personality can be part of the same person.

7. In general, I know who I am and where I am headed in my life.

8. I often feel torn in different directions and unable to decide which way to go.

9. I feel very certain about what I want out of life.

10. I often feel conflicted or uncertain about my career plans.

APPENDIX
INFORMED CONSENT

You are invited in participant in doctoral research project directed by Dr. G. Neimeyer, the faculty supervisor of this project. You are asked to complete questionnaires about yourself which will take approximately a total of forty minutes. The purpose of this research is to explore your views of yourself and various personality characteristics. Your responses will remain entirely anonymous. No personal risks or discomforts are expected by your participation in this research. Two extra credit points will be awarded for your participation.

You do not have to answer any question you do not wish to answer. You are free to withdraw your consent and may discontinue participation in the project at any time without penalty. If you have any questions about this research, you are welcome to contact the principal investigator, Lionel Rood, at his office at 378-2600. In addition, for more information concerning the rights of research participants, you are welcome to contact the UFIRB office at Box 112250, University of Florida, Gainesville, 32611-2250.

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

_____ _____
(your signature)   (date)

_____ _____
Lionel Rood, Principal Investigator

REFERENCES

Ainsworth, M., Blehar, M., Waters, E., & Wall, T. (1978). <u>Patterns of attachment</u>. Hillsdales, NJ: Lawrence Erlbaum.

Ainsworth, M., & Bowlby, J. (1991). An ethological approach to personality development. <u>American Psychologist, 46</u>, 331-341.

Antonovsky, A. (1979). <u>Health, stress, and coping</u>. San Francisco: Jossey-Bass.

Antonovsky, A. (1987). <u>Unravelling the mystery of health</u>. San Francisco: Jossey-Bass.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. <u>Journal of Social and Personal Relationships, 7</u>, 147-178.

Bartholomew, K., & Horowitz, L. (1991). Attachment styles among young adults: A test of a four-category model. <u>Journal of Personality and Social Psychology, 61</u>, 226-244.

Bartholomew, K., & Shaver, P. (1998). Methods of assessing adult attachment. In J.A. Simpson & W. Rholes (Eds.), <u>Attachment theory and close relationships</u> (pp.25-45). New York: The Guilford Press.

Beck, A. (1976). <u>Cognitive therapy and the emotional disorders</u>. New York: International Universities Press.

Beck, A., Rush, A., Shaw, B., & Emery, G. (1979). <u>Cognitive therapy of depression</u>. New York: The Guilford Press.

Blascovich, J., & Tomaka, J. (1988). The Self-esteem scale. In J. Robinson, P. Shaver, & L. Wrightsman (Eds.), <u>Measures of personality and social psychological attitudes</u> (pp. 121-123). New York: Academic Press.

Bowlby, J. (1969). <u>Attachment and loss: Vol. 1. Attachment</u>. New York: Basic Books.

Bowlby, J. (1973). <u>Attachment and loss: Vol. 2. Separation</u>. New York: Basic Books.

Bowlby, J. (1988). <u>A secure base: Parent-child attachment and healthy human development</u>. New York: Basic Books.

Brennan, K., Shaver, P., & Tobey, A. (1991). Attachment styles, gender, and parental problem drinking. <u>Journal of Social and Personal Relationships, 8</u>, 451-466.

Bretherton, I. (1995). The origins of attachment theory. In S. Goldberg, R. Muir, & J. Kerr (Eds.), <u>Attachment theory: Social, development and clinical perspectives</u> (pp. 45-84). Hillsdale, NJ: The Analytic Press.

Campbell, J., Trapnell, P., Heine, S., Katz, I., Lavallee, L., & Lehman, D. (1996). Self-concept clarity. <u>Journal of Personality and Social Psychology, 70</u>, 141-156.

Chamberlain, K., Petrie, K., & Azariah, R. (1992). The role of optimism and sense of coherence in predicting recovery following surgery. <u>Psychology and Health, 6</u>, 301-310.

Cole-Detke, H., & Kobak, R. (1996). Attachment processes in eating disorder and depression. <u>Journal of Consulting and Clinical Psychology, 64</u>, 282-290.

Corcoran, K., & Fischer, J. (1987). <u>Measures for clinical practice</u>. New York: Free Press.

Costello, C., & Comrey, A. (1967). Scales for measuring depression and anxiety. <u>The Journal of Psychology, 66</u>, 303-313.

Debats, D. (1998). Measurement of personal meaning. In P. Wong & P. Fry (Eds.), <u>The human quest for meaning</u> (pp.237-260). London: Lawrence Erlbaum Publishers.

Dozier, M., & Tyrrell, C. (1998). The role of attachment in therapeutic relationships. In J. Simpson & W. Rholes (Eds.), <u>Attachment theory and close relationships</u> (pp.221-248). New York: Guilford Press.

Eagle, M. (1995). The developmental perspectives of attachment and psychoanalytic theory. In S. Goldberg, R. Muir, & J. Kerr (Eds.), <u>Attachment theory: Social, development and clinical perspectives</u> (pp. 123-150). Hillsdale, NJ: The Analytic Press.

Flannery, R., & Flannery, G. (1990). Sense of coherence, life stress, and psychological distress. <u>Journal of Clinical Psychology, 46</u>, 415-420.

Flannery, R., Perry, J., Penk, W., & Flannery, G. (1994). Validating Antonovsky's sense of coherence scale. <u>Journal of Clinical Psychology, 50</u>, 575-577.

Fraley, R.C., & Waller, N. G. (1998). Adult attachment patterns. In J. Simpson & W. Rholes (Eds.), <u>Attachment theory and close relationships</u> (pp.77-114). New York: The Guilford Press.

Gibson, L., & Cook, M. (1996). Neuroticism and sense of coherence. <u>Psychological Reports, 79</u>, 343-349.

Griffin, D., & Bartholomew, K. (1994). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. <u>Journal of Personality and Social Psychology, 67</u>, 430-445.

Guidano, V. (1987). <u>Complexity of the self</u>. New York: Guilford Press.

Guidano, V. (1991). <u>The self in process</u>. New York: Guilford Press.

Guidano, V. (1995). A constructivist outline of human knowing processes. In M. Mahoney (Ed.), <u>Cognitive and constructive psychotherapies</u> (pp. 89-102). New York: Springer Publishing Company.

Guidano, V., & Liotti, G. (1983). <u>Cognitive processes and emotional disorders</u>. New York: Guilford Press.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. <u>Journal of Personality and Social Psychology, 52</u>, 511-524.

Hazan, C., & Shaver, P. (1990). Love and work: An attachment-theoretical perspective. <u>Journal of Personality and Social Psychology, 59</u>, 270-280.

Isabella, R., Belsky, J., & von Eye, A. (1989). Origins of infant-mother attachment: An examinations of interaction synchrony during the infant's first year. <u>Developmental Psychology, 25</u>, 12-21.

Kelly, G. (1963). _The psychology of personal constructs_. New York: Norton.

Kemp, M., & Neimeyer, G. (1999). Interpersonal attachment: Experiencing, expressing, and coping with stress. _Journal of Counseling Psychology_.

Klinger, E. (1998). The search for meaning in evolutionary perspective and its clinical implications. In P. Wong & P. Fry (Eds.), _The human quest for meaning_ (pp.27-50). London: Lawrence Erlbaum Associates, Publishers.

Klohnen, E., & John, O. (1998). Working models of attachment. In J. Simpson & W. Rholes (Eds.), _Attachment theory and close relationships_ (pp.115-141). New York: The Guilford Press.

Kobak, R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. _Child Development_, 64, 135-146.

Korotkov, D. (1998). The sense of coherence: Making sense out of chaos. In P. Wong & P. Fry (Eds.), _The human quest for meaning_ (pp.51-70). London: Lawrence Erlbaum Associates, Publishers.

Levy, K., Blatt, S., & Shaver, P. (1998). Attachment styles and parental representations. _Journal of Personality and Social Psychology, 74_, 407-419.

Mahoney, M. (1991). _Human change processes_. New York: Basic books.

Mahoney, M., Miller, H., & Arciero, G. (1995). Constructive metatheory and the nature of mental presentation. In M. Mahoney (Ed.), _Cognitive and constructive psychotherapies_ (pp. 103-120). New York: Springer Publishing Company.

Main, M. (1995). Recent studies in attachment. In S. Goldberg, R. Muir, & J. Kerr (Eds.), _Attachment theory: Social, development and clinical perspectives_ (pp. 407-474). Hillsdale, NJ: The Analytic Press.

McAdams, D. (1993). _The Person_. New York: Harcourt Brace Publishers.

Mikulincer, M. (1993). Attachment style and the mental representation of the self. _Journal of Personality and Social Psychology, 67_, 1203-1215.

Mikulincer, M., (1997). Adult attachment style and information processing. Journal of Personality and Social Psychology, 72, 1217-1230.

Mikulincer, M., & Florian, V. (1998). The Relationship between adult attachment styles and emotional and cognitive reactions to stressful events. In J. Simpson & W. Rholes (Eds.), Attachment theory and close relationships (pp.143-165). New York: The Guilford Press.

Mikulincer, M., Florian, V., & Weller, A. (1993). Attachment styles, coping strategies, and posttraumatic psychological distress: The impact of the gulf war in Israel. Journal of Personality and Social Psychology, 64, 817-826.

Mikulincer, M., & Orbach, I. (1995). Attachment styles and repressive defensiveness. Journal of Personality and Social Psychology, 68, 917-925.

Neimeyer, R. (1994). The role of client-generated narratives in psychotherapy. Journal of Constructivist Psychology, 7, 229-242.

O'Brien, E., & Epstein, S. (1988). The multidimensional self-esteem inventory. Odessa, FL: Psychological Assessment Resources.

Parry, A., & Doan, R. (1994). Story re-visions: Narrative therapy in a postmodern world. New York: Guilford Press.

Patrick, M., Hobson, R., Castle, D., Howard, R., & Maughn, B. (1994). Personality disorder and mental representation of early social experience. Development and psychopathology, 6, 375-388.

Pennebaker, J., & Beall, S. (1986). Confronting a traumatic event: Toward an understanding of inhibition and disease. Journal of Abnormal Psychology, 95. 274-281.

Pennebaker, J., Kiecolt-Glaser, J., & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. Journal of Consulting and Clinical Psychology, 56, 239-245.

Petrie, K., & Azariah, R. (1990). Health promoting variables as predictors of response to a pain management program. Clinical Journal of Pain, 6, 43-46.

Petrie, K., & Brook, R. (1990). Sense of coherence, self-esteem, depression and hopelessness as correlates of reattempting suicide. British Journal of Clinical Psychology, 31, 293-300.

Rood, L., & Neimeyer, G. (1998). Identity coherence and integration in psychological adjustment. University of Florida: Unpublished.

Rosen, H. (1996). Meaning-making narratives: Foundations for constructivist and social constructionist psychotherapies. In H. Rosen & K. Kuehlwein (Eds.), Constructing realities: Meaning-making perspectives for psychotherapists (pp. 3-54). San Francisco: Jossey-Bass.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.

Rosenstein, D., & Horowitz, H. (1996). Adolescent attachment and psychopathology. Journal of Consulting and Clinical Psychology, 64, 244-253.

Rothbard, J., & Shaver, P. (1994). Continuity of attachment across the life span. In M. Sperling & W. Berman (Eds.), Attachment in adults: Clinical and developmental perspectives (pp. 31-71). New York: Guilford Press.

Shaver, P., & Clark, C. (1994). The psychodynamics of adult romantic attachment. In J. Masling & R. Bornstein (Eds.), Empirical perspectives on object relations theory (pp. 105-156). Washington, DC: American Psychological Association.

Shaver, P., & Hazan, C. (1993). Adult romantic attachment. In D. Perlman & W. Jones (Eds.), Advances in personal relationships (Vol. 4, pp. 29-70). London: Kingsley.

Shaver, P., & Rubenstein, C. (1980). Childhood attachment experience and adult loneliness. In L. Wheeler (Ed.), Review of personality and social psychology (Vol 1, pp. 42-73). Beverly Hills, CA: Sage.

Silver, R., Boon, C., & Stones, M. (1983). Searching for meaning in misfortune. Journal of Social Issues, 39, 81-101.

Simpson, H. (1990). The influence of attachment styles on romantic relationships. Journal of Personality and Social Psychology, 59, 273-280.

Soldz, S. (1996). Psychoanalysis and constructivism. In H. Rosen & K. Kuehlwein (Eds.), Constructing realities: Meaning-making perspectives for psychotherapists (pp. 277-306). San Francisco: Jossey-Bass.

Sroufe, L. (1985). Attachment classification from the perspective of infant-caregiver relationships and infant temperament. Child Development, 56, 1-14.

Stosny, S. (1995). <u>Treating attachment abuse</u>. New York: Springer Publishing Company.

Weiss, R. (1982). Attachment in adult life. In C. Parkes & J. Stevenson-Hinde (Eds.), <u>The place of attachment in human behavior</u> (pp. 171-184). New York: Basic Books.

BIOGRAPHICAL SKETCH

Lionel Rood was born and raised in Michigan. He attended Western Michigan University and Michigan State University as a dual major in Psychology and Philosophy during his undergraduate years. After extensive travel in Africa and Europe, he continued this dual study in his graduate work at the University of Florida. Lionel first obtained a Ph.D. in philosophy with an area of specialty in philosophy of science that included advanced courses in psychology, mathematics, and physics. This background led to additional opportunities for teaching and he became an instructor at Santa Fe Community College for many years. Travel abroad and music continued to be an important component of his life.

Upon completing these studies in the philosophy of science, he continued his dual interest in psychology and philosophy. He also became a licensed professional counselor and joined a full-time private practice. He maintained this practice throughout the 1990s while also working on a Ph.D. in counseling psychology. He had become involved in constructivist psychology during these years which provided not only a theoretical synthesis of his interests in psychology and philosophy but also provided exciting ideas and approaches for his professional counseling practice.

As the decade came to a close, Lionel moved to the Atlanta metropolitan area after purchasing his lifelong ideal of a home. Upon completion of his Ph.D., he is resuming his full-time work in professional psychology. He also hopes to maintain active research and publishing with local universities and hospitals.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.
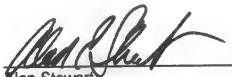
Greg Neimeyer, Chair
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Martin Heesacker, Cochair
Professor of Psychology

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Alan Stewart
Assistant Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Peter Sherrard
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December, 2000

Dean, Graduate School